

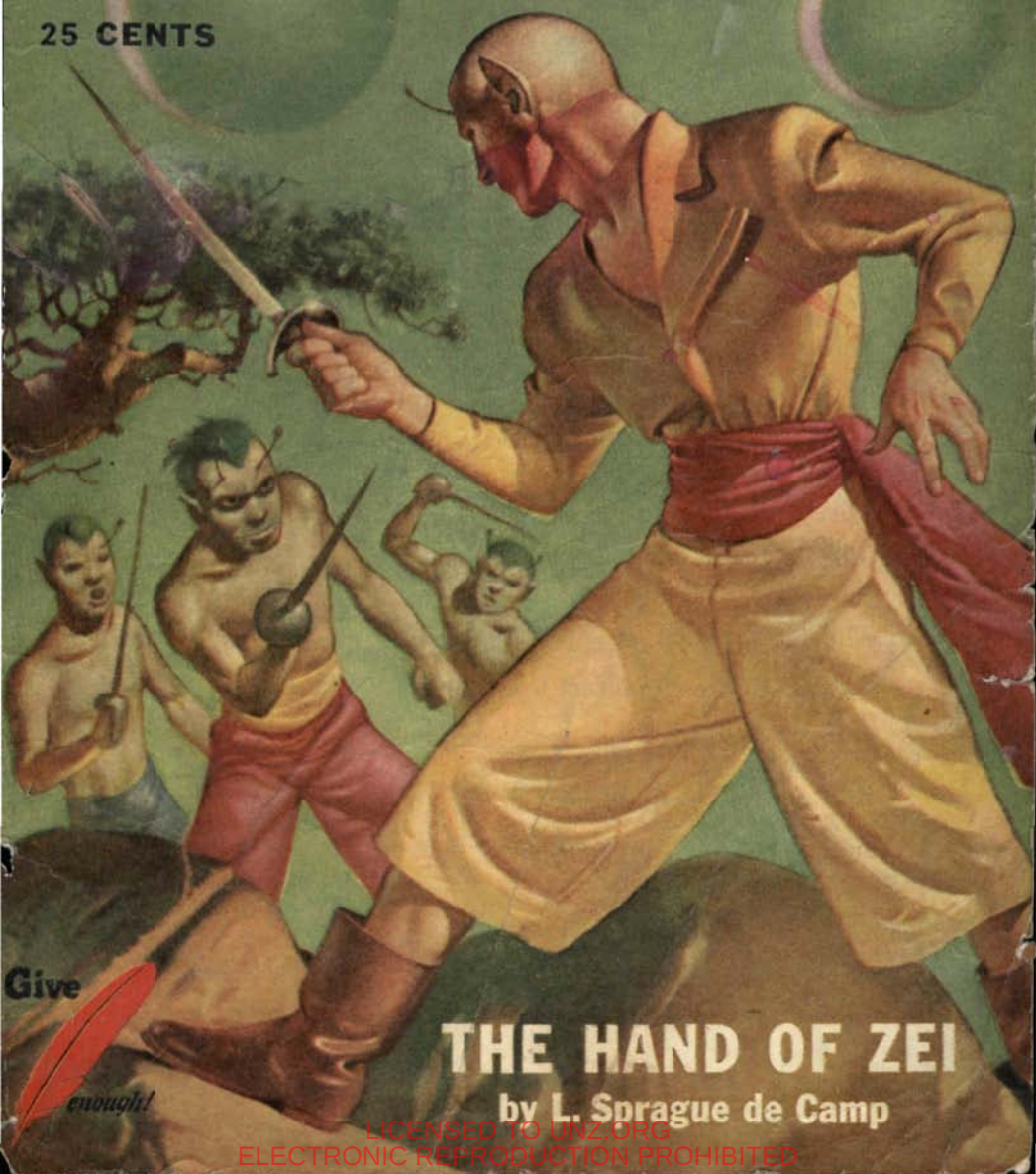
Astounding

SCIENCE FICTION

REG. U. S. PAT. OFF.

OCTOBER 1950

25 CENTS



THE HAND OF ZEI

by L. Sprague de Camp

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THE HUBBARD DIANETIC RESEARCH FOUNDATION has been opened for training in dianetic auditing and research into the field of human thought and dianetic principles. The Foundation has been established in Elizabeth, New Jersey; departments of the Foundation will be opened as rapidly as possible in cities elsewhere.

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AST-1E

FLYING MACHINE

It appears to be considered incumbent on a science-fiction magazine to express some opinion concerning the "flying saucers." Since *Astounding SCIENCE FICTION* is not, and never pretended to be, a news magazine, I am working on data some four months old as you read this. I'm not able to prophesy what information will have come to light in the interim. I have, in the past, steered fairly clear of the flying saucer question for several reasons. Basically, it's a case of "no data."

Now a mind, to be sane, must be able to remember, and know it is remembering; it must be aware of its present environment, and know it is aware of that reality; and must be able to imagine, and know that it is, imagining. The same applies to any group, nation, or even a magazine. *Astounding SCIENCE FICTION* represents two of those functions; awareness-of-now in our science articles, the valid data of what is. Our stories represent, of course, the equally valid function of imagination.

The flying saucers have represented that confusion-state that is simply not computable; they are halfway between data-of-now and imagination. They can't be properly catalogued in either class at this moment. They belong in the "Maybe" file, with question marks. As such, they don't fit either of the categories Science Fiction properly deals with.

So much for why there has been no outcropping of saucers in this magazine.

Now as to available, actual data on the saucers—the data that must be filed in the "Awareness of a Maybe" class, let's call it.

In all times, in all places, there is a constant—statistically constant, at least—level of human error, hallucination, and also a certain level of real inexplicables. Mankind does *not* know all the answers. Meteors, until recognized and fitted into the scheme of nature, constituted a real inexplicable; they could not properly be thrown out of data-consideration, nor could they, at that time, be fitted into a general pattern. Right now, there are similar phenomena which must be filed in that field of real inexplicables. The poltergeist phenomenon, for instance, I genuinely believe is an example of the class. It's a piece of the great jig-saw puzzle of all knowledge relating to an area of that puzzle that we haven't reached yet. At the present time, science is, we'll say, assembling the jig-saw pieces that have a brown background with green splotches, a blue area with white and green markings, and pieces of a purple area with pink spots. Some pieces that have yellow background with orange dots exist, but we have to set them aside until we can find how they tie into the areas we are now working on.

Those yellow-with-orange pieces are "real inexplicables" now. Let's continue with the development and expansion of the areas we have now; sooner or later, we'll find a piece that is half brown-with-green, and half yellow-with-orange, and then we can develop that new area. Until then, we must leave those pieces in abeyance; recognize they exist, but not try to force them, willy-nilly, into areas we have.

So we have a sort of background noise

level. Like a radio set tuned to a frequency where there is no station. There is some natural static coming in—the real inexplicables—and some receiver hiss noise—human observer hallucination and error.

But those phenomena constitute a fairly predictable steady “noise level,” or, in nuclear physics terms, “background count.”

When the number of strange-phenomenon reports rises sharply, and the nature of the strange-phenomena reported shows a marked degree of consistency, we have reason to believe we have now a real input signal—that something new has actually appeared.

In the radio-receiver analogy, the increased noise from the set may be due to increased natural static—the approach of a thunderstorm. Receivers are used for the purpose of detecting thunderstorm approach; the signal is real and valid. So, increased reports of strange-phenomena may be increasing occurrence of a real-inexplicable, some natural law not yet recognized and described going into heightened activity for an unknown reason.

But flying saucers are mechanisms, described with considerable consistency, by many reporters, in many places. They are not natural phenomena type real-inexplicables; they are artifacts.

Some type of real artifact, referred to as flying saucers, appears to exist; the incidence of reports far exceeds any reasonable level of “background count.” Too many observers—too many places—too many simultaneous observations of the same unknown. Something real exists; that we can file as real, valid data, labeled “high probability; must be considered in overall computation.”

Next, we observe that a scattering of reports of flying saucers has come in from all over the planet. But—this is an important datum—the planet-wide reports do not noticeably exceed the normal level of what we have called here the “background count.”

Only in the area of the United States has the frequency of report markedly,

very markedly, exceeded the normal expectation of strange-phenomenon reports.

Further the maximum incidence of reports centers around that area of the nation which could be called the “square states,” the states west of the Midwest and east of the West Coast generally. Many reports have come from the northern areas of these states, and from the Pacific Northwest, although these areas generally have low population density.

There have also been considerable reports from the southwestern border states.

But Canadian residents have not reported occurrences with anything approaching the frequency of the northwestern states of this country.

Northern Mexico does not report occurrences with anything approaching the United States southwestern frequency.

It has been suggested that the flying saucers are interplanetary visitors. But the frequency of occurrence does not show an even planetary distribution; there is a background-count level around the world, with high peak level in the United States.

It's a remarkable interplanetary visitor that shows such keen awareness of political boundaries.

The data available is very unsatisfactory: the whole question must all be filed under “maybe.” But there is definite reason for watching developments keenly, and with acute interest. There are other phenomena not at all in the “maybe” classification that might have bearing, and should be considered, at least, as possibly relevant.

The United States definitely has announced that a program of research on atomic-powered aircraft was started before the end of the war.

Mass is the source of gravitational attraction: practically all the mass of matter is concentrated in the nucleus of the atom. The United States is unquestionably further advanced in nuclear research than the rest of the world; we have nearly all the world's cyclotrons; all the really high-

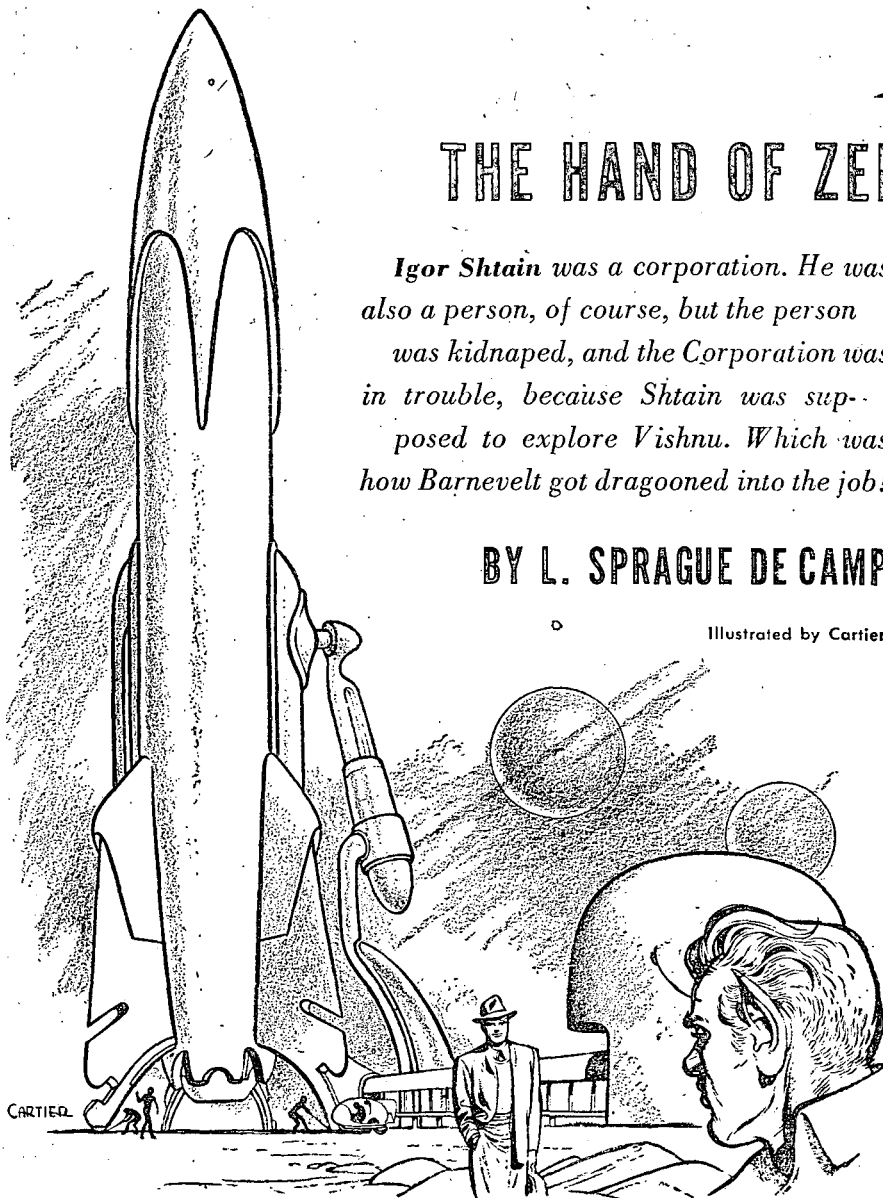
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THE HAND OF ZEI

Igor Shtain was a corporation. He was also a person, of course, but the person was kidnaped, and the Corporation was in trouble, because Shtain was supposed to explore Vishnu. Which was how Barnevelt got dragooned into the job!

BY L. SPRAGUE DE CAMP

Illustrated by Cartier



Author's note: Because some have caviled at the odd names in my *Viagens* stories, I offer these suggestions for pronunciation: *Janrú* is "zhan-roo"; *Jorge*, "zhorzhy"; Castanhoso, "cas-tahn-yo-soo"; and *Sheafasè*, "shay-ah-fah-seh". *Abreu* rhymes (approx.) with "Mayo"; *Alvandi* with "candy"; *Báh* with German *nach*; *Dur* with "poor"; *Gavao* with "avow"; *Goís* with "voice"; *gvám* with "calm"; *Kádj* with "dodge" (or, if you drop your r's, with "large"); *kashyó* with "pashaw"; *Kir* with "here"; *Nich-Nyamē* with "which llama"; *Novorecife* with "beefy"; *Qarar* with Spanish *arar*; *Qirib* with "a grebe"; *Qou* with "no"; *Shtain* with "line"; *Snyol* with "yawl"; *Tagde* with "Magda"; *Viagens* (approx.) with "Leah paints"; *Zéi* with "hay"; et cetera. The rest should be obvious, and in any case you may treat them as you please. As *q* and *gh* represent Gozashtandou sounds that don't occur in English, you may sound them as *k* and *g* respectively.

I.

Dick Barnevelt hunched his moose-like form over his typewriter and wrote:

Twenty-five degrees north of the equator on the planet Krishna lies the Banjao Sea, the largest body of water on this planet. And in this sea is found the Sunqar, home of legend and mystery.

Here under the scorching rays of the hot high sun, the beaked galleys of *Dur* and the tubby roundships of *Djazzmurian* slowly rot in the unbreakable grip of a vast floating continent of the *terpahla* sea-vine. Even the violent storms of the *Krishnan* subtropics no more than ruffle the surface of this immense floating swamp—which, however, sometimes heaves and bubbles with the terrible sea-life of the planet, such as the *gvám* or harpooner.

Barnevelt sat back to wonder:

For a couple of years he'd been writing about the places *Shtain* explored; would he ever see any of them? If his mother died— But that was unlikely. With modern geriatrics she'd be good for another century. He still had a great-great-grandfather alive in the Netherlands. Besides, he thought guiltily, that was no way to think about one's mother. He resumed:

Nothing, once caught in this web of weed, can escape unless it can fly like the aqebats that wing over from the mainland to prey on the smaller sea-life of the Sunqar. Here time means nothing; nothing exists save silence and haze and heat and the stench of the strangling vine.

At least, thought Barnevelt, this hack writing was better than trying—as he had once tried—to ram the glories of English literature down the unwilling throats of rural adolescents with only two interests: sex; and escape from the toils of the public school system.

To the heart of this forbidding place *Igor Shtain*, most celebrated of living explorers, plans to penetrate on his forthcoming *Krishnan* expedition, to clear up once and for all the sinister rumors that for years have issued from this undiscovered country.

Barnevelt gazed into space, like a moose that has heard the mating cry of its kind, while waiting for the next sentence to form. A fine thing if *Shtain* never showed up to carry out his expedition! He, *Dirk Barnevelt*, couldn't release this publicity

puff until the missing explorer was found.

Well, you may say, why cannot Shtain simply ask the skipper of a spaceship to set him down near the Sea, and fly over it in his helicopter, cameras whirring and guns ready? Because Krishna is a Class H planet, and the Interplanetary Council regulations forbid visitors from other planets to reveal mechanical devices and inventions to its egg-laying but human-looking natives, who are deemed on one hand too backward and warlike to be trusted with such things, and on the other intelligent enough to take advantage of them. So there will be no helicopter, no guns. Dr. Shtain will have to do it the hard way. But how? For the Sunqar can neither be walked over nor sailed through—

Barnevelt jumped like a tripped mousetrap as Mrs. Fischman said over his shoulder: "Time for the meeting, Dirk."

"What meeting?"

Mrs. Fischman, the secretary of Igor Shtain Ltd., rolled her eyes up as she always did when Barnevelt showed his balmier side. "The directors. They want you."

He followed her into the board room, bracing himself for unpleasant surprises like a man summoned to hear the verdict of a court-martial. The three directors of Igor Shtain, Ltd. were present: Stewart Laing, who was also vice president and business manager; the banker Olaf Thorpe; and Panagopoulos, also treasurer. Mrs. Fischman, the secretary, completed the list of executives since Shtain had disappeared.

Even though the firm's president

was missing, his likeness looked out at them from the colored bathygraph on the wall: a square-jawed brick-red face seamed with many small wrinkles; coldly glittering china-blue eyes; a close-cut brush of coppery hair speckled with gray.

On the unofficial side there were, besides Barnevelt, the little Dionysio Pérez the photographer, the large brown George Tangaloe the xenologist, and Grant Marlowe the actor, looking much like the picture on the wall even without the make-up he wore when impersonating Shtain on the lecture platform.

"What ho, ghost!" said Tangaloe, grinning.

Barnevelt smiled feebly and slouched into the remaining chair. Though he, like the others, was a stockholder in the company, his holdings were so small that he, a minor among muskellunges, did not speak with any authority. However, this was not a formal directors' or stockholders' meeting, but an informal assembly of worried specialists who co-operated to put before the public that synthetic entity known as "Igor Shtain," of which the real Shtain was only a part—albeit the most important part.

"Well, Stu?" said Marlowe, lighting his pipe.

Laing said: "No news of the Old Man."

Mrs. Fischman rasped: "Those detectives! Hundreds of bucks a day for weeks, and not a thing do they find. I bet they never did anything but trail wayward husbands before

we hired them."

"Oh, no," said Laing. "Ugolini has fine references."

"Anyway," she continued, "if we don't get going, that contract with Cosmic Features won't be worth a last year's snowball."

Laing said: "Ugolini does have a theory that the Old Man has been taken to Krishna."

"How does he figure?" asked Marlowe, puffing.

"Igor was hoping to clear up those rumors about a connection between the Sunqar and the janrú racket. The Division of Investigation hasn't been able to get a man in there—or rather those they sent never came out. So the W. D. I. hoped the Old Man, as a private citizen, could learn something. Well, thanks to Dirk, Igor gets plenty of publicity about his safari. Now, let's suppose the main connections of the janrú ring are on Earth because of the effect of the stuff on human beings."

(Pérez looked as if he were going to cry.)

Laing continued: "Then why shouldn't the ring, hearing of this expedition, decide to put the Old Man on ice?"

Barnevelt cleared his throat, his long equine face taking on the embarrassed look it always assumed before his superiors. "How d'you know they haven't murdered him? I've often wanted to myself."

"We don't, but it's not easy to dispose of a body completely, and there's no trace of his body on Earth."

Tangaloa's organ-bass voice broke in: "Blokes have been smuggled past the *Viagens Interplanetarias* security measures before."

"I know," said Laing. "However, we've got private, city, state, national, and international police looking for Igor, and that's all we can do in that direction. Our immediate concern is that contract. All I can see is for some of us to go to Krishna and carry out Igor's plans. Get the fifty thousand meters of film, a quarter of it in the Sunqar, turn it over to Cosmic, and by then we shall know if the firm's going to continue. If Shtain's on Krishna, rescue him if possible."

Laing's sharp eyes swept the room. All nodded.

"So," he continued, "the next question is: Who?"

Most of those present looked away, assuming the detached air of people who didn't work there at all, but had just dropped in for a visit.

George Tangaloa patted his paunch. "Dio and I can do it."

Pérez jumped up. "I no go! I no go until thees trouble with my wife is feixed. That 'drug, thees woman use on me, not my fault—"

"Yes, yes," interrupted Laing. "We know about your trouble, Dio, but we can't send one man alone."

Tangaloa yawned. "I presume I could manage by myself. Dio has checked me out on the Hayashi camera."

Mrs. Fischman said: "If we send George alone, we won't get enough

film to wrap around your finger. He'll settle down the first place they got good steaks and beer and—"

"Why Ruth!" said Tangaloa with ostentatious innocence. "Are you insinuating I'm indolent?"

"Right. You're indolent," said Marlowe the actor. "Probably the laziest hunk of meat that ever came out of Samoa. You need somebody like Dirk to keep an eye on you—"

"Hey!" cried Barnevelt, shyness dropping from him like a discarded cloak. "Why me? Why not you? Matter of fact you not only look like Igor, you can even imitate that foul Russian accent of his. It is you who should gaw, my frand—"

Marlowe waved a hand. "I'm too old for roughing it, just a mass of flab, and I never had any training at that sort—"

"Neither have I! And you said yourself the other day I was an impractical intellectual, so who am I to clear the dark places and let in the law?"

"You can work the Hayashi, and you yacht, don't you?"

"Oh, foof! Only on a friend's boat. You don't think I own a yacht on my pay, do you? Of course if you wanted to raise it—"

Marlowe shrugged. "It's the experience that counts, not how you got it. And being brought up on a farm you know about the simple life."

"But we had electricity and running—"

"Furthermore, all of us have dependents except George and you."

"I've got my mother," said Barne-

velt, his naturally ruddy face turning a lobsterish red. References to his rural background always embarrassed him, for while he preferred city life, he had never got over the feeling that to these born city-slickers he was a figure of fun.

"Bunk!" said the acid voice of Mrs. Fischman. "We know all about your old lady, Dirk. Best thing for you would be to get away from her apron strings."

"Look here, I don't see what business—"

"We'll pay her your salary while you're gone, if you like, so she won't starve. And if you put it over, there'll be enough dividend to get you out of those debts she got you into."

"Enough," added Marlowe, "so you'll be able to afford a fancy duplex apartment with an Oriental manservant."

Tangaloa put in: "Don't you think he'd get more fun out of a French maid?"

Barnevelt, now scarlet, shut up. It was always a mistake to bring up his mother: On one hand he felt he ought to defend her, while on the other he feared they were right. If only his father hadn't died while he was still a boy—

"Besides," Marlowe went on, "I know my limitations, and I shouldn't be any better at Igor's job than he was at mine in New Haven."

"What's this?" said Thorpe. "Don't think I know that story."

Laing explained: "You know Igor's the world's worst public

speaker, so Grant takes his place on the platform, using his films, just as Dirk ghost-writes his books and articles. For emergencies we procured a little mechanical speaker that looks like a flower on the lapel and made recordings of some lectures, written by Dirk and spoken by Grant. Then we trained Igor to stand there moving his mouth in synchronism with the speech coming out of the speaker."

"And then?"

"Then two years ago Grant got sick, and Igor undertook the job with this gadget. But when he stood up and started the speaker, the thing had got out of adjustment and played the same line over and over: '... happy to be here ... happy to be here ... happy to be here ...', like that. It ended with Igor dancing on the gadget and howling Russian curses."

While Thorpe laughed, Laing turned to Barnevelt. "It's a lot to ask, Dirk, but there's no way out. Besides, if you're Igor's ghost, don't you want your body back?"

Tangaloa, grinning like a large Polynesian Billiken, sang: "Bring back, bring back, oh bring back my body to me, to me!"

All laughed save Barnevelt.

"No," he said with the exaggerated firmness of a man who feels his inner defenses beginning to crumble, "I can make a perfectly good living on Earth without Igor Shtain Limited—better than I'm making now."

"Wait," said Laing. "There's more

to it. I had a talk with Tsukung of the Division of Investigation, and they're really worried about the janrú rackèt. You know what it did to Dio, and you read about the Polhemus murder. The extract is so powerful you can hide a hundred doses in a tooth cavity. It's diluted thousands of times over, and finally appears in perfumes with names like *nuit d'amour* and *moment d'extase*. But with the janrú added they really do what the names imply. A woman can squirt herself with the stuff, and as soon as a man gets a whiff he goes clean daft and she can make him jump through hoops as if he were under Osirian pseudohypnosis.

"But that's not all. It only works when a female uses it on a male, and the way the stuff's getting spread around, Tsukung's afraid the women will completely dominate the men of the world in a couple of decades."

"That wouldn't be so bad," said Mrs. Fischman. "I could use some on that nogoodnik husband of mine."

"So," continued Laing, "you can save the male half of the human race from a fate worse than death—or at least a fate like the one your mother's been inflicting on you. Isn't that worth while?"

"Come to think of it," said Marlowe, "are we sure Dirk's mother hasn't been using it on him?"

Barnevelt shook his head vigorously. "It's just that she got the psychological jump on me long ago. But what do I get out of this? I'm a peasant slave already."

"You'd get away from her," said

Laing. "Men *do* escape mothers."

Tangaloa said: "You don't want to see the women enslave the men, the way you Westerners used to do to your women, do you?"

"It'll make a man of you," said Marlowe. "Anybody your age who's never been married needs something drastic."

"It'll give you real experience to write about," said Mrs. Fischman.

"Better get in your adventures now, while you're young and unattached," said Thorpe. "If I had your chance—"

"We'll raise your salary," said Panagopoulos. "And with your expense account on Krishna you can—"

"Think of all the screwy animals you'll see," said Tangaloa. "You're crazy about queer beasts."

"And," said Laing, "its not as though we were asking you to go to Mars and live among those oversized insects with an oxygen mask on your face. The natives look almost human."

"In fact, the females—" said Tangaloa, making curving motions in the air with his hands.

"Oh, I'll go," said Barnevelt at last, knowing that they'd talk him round in the end. Anyway, hadn't he promised himself an adventure like this years ago when he was a boy on the farm in Chautauqua County? Served him right.

"George," said Barnevelt, "what do I do now? Increase my insurance?"

"Oh, it's all arranged," said

Tangaloa. "I have reservations on the *Eratosthenes* leaving Mohave day after tomorrow."

Barnevelt stared. "You mean . . . you mean you actually had this all cooked up in advance?"

"Certainly. We knew you'd come round."

Although Barnevelt turned red and started to sputter, Tangaloa added calmly: "When can you be packed?"

"That depends. What do I bring, ear muffs?"

"Just ordinary clothes for a couple of months. I've got the cameras and other special gear, and the rest we buy at Novorecife. No use paying freight on more luggage than we can help."

"Where's the *Eratosthenes* bound for? Pluto?"

"No, Neptune's now the staging planet for the Cetic planets. The *Amazonas* takes us over the long jump to Krishna."

"What do I do about my mother?"

"Why, nothing!"

"But if she finds out she'll forbid the trip, and I can't defy her. That is, I can, but it never works."

Tangaloa grinned. "Tell her you're going on a cruise with that sailing friend of yours."

"Good. I'll say we're going to visit my great-grandmother Anderson in Baltimore. Matter of fact I'd better call Prescott; nothing like getting your lies straightened out in advance." He dialed his wrist phone. "Harry? Dirk. Could you do me a favor?"

When Barnevelt let himself into his apartment he was relieved to find his mother out. No doubt she was downtown enjoying her usual hobby of overdrawing her charge accounts. With guilty haste he packed a suitcase, bid good-by to the cat, the goldfish, and the turtle, and in half an hour was tiptoeing out, feeling much like a tyro at burglary.

But as the front door closed behind him a bugle blew through the caverns of his mind. His stoop straightened; after all man is man and master of his fate. If all went well, he wouldn't see his mother again before leaving. He would, for the first time in his thirty-one years, be really on his own.

But was it right? A spasm of doubt assailed him.

And so he made his way by subway and bus to Tangaloo's flat, the two sides of his nature contending. As he entered, the Oedipean side was uppermost.

"What are you looking so downcast about, cobber?" asked Tangaloo. "Anybody'd think you were a Cosmotheist whose guru had just died. Do you want to spend your whole life on Earth?"

"No," said Barnevelt, "but my conscience won't let me walk out this way. Our one white lie sits like a little ghost here on the threshold of our enterprise. Maybe I'd best call her—" and he pulled the stylus out of its clip to dial.

"No you don't!" said Tangaloo with unwonted sharpness, and shot out a large brown hand to grip

Barnevelt's wrist.

After a few seconds Barnevelt's eyes fell. "You're right. In fact I'd better disconnect my phone." He fitted the screwdriver end of the stylus into the actuating slot, and turned it with a faint click.

"That's better," said Tangaloo, turning back to his packing. "Have you ever been psyched?"

"Ayuh. Turned out I was a schizoid Oedipean. But my mother stopped it; she was afraid it might work."

"You should have grown up in a Polynesian family. We're brought up by so many different people at once that we don't develop these terrific fixations on individuals."

He folded shirts to fit his bag, whistling "*Laau Tetele*," and began fitting special gear into appropriate compartments. First medicines and drugs, including the all-important longevity capsules without which no man could expect to attain his normal ripe age of two hundred plus.

Then six Hayashi one-millimeter cameras, each mounted in a large ornate finger ring that effectively camouflaged it. A pair of jeweler's monocles and tiny screwdrivers for opening the cameras and changing the film.

Then a couple of König and Das notebooks with titaniridite sheets, a magnifier for viewing the pages, and a folding pantograph for reducing the hand motions of the writer to almost microscopic size. By writing small and using the Ewing digraphic alphabet, a skilled note taker like

Tangaloa could crowd over two thousand words onto one side of a six-by-ten centimeter sheet.

Barnevelt asked: "Will the *Via-gens* people at Krishna actually let us take the Hayashis out of the reservation?"

"Yes. By a strict interpretation of Regulation 368 they're not supposed to, but they wink at the Hayashi because the Krishnans don't notice it. Besides it contains a spring destructor, so if one of them tried to take it apart it would fly into little bits. Put this microfilm spool in your bag."

"What's that?"

"Elementary Gozashtandou. You can work at it en route, and here's a stack of records." He handed Barnevelt a disk about two centimeters thick by six in diameter. "They have players on the ships. Up stick, laddie!"

At New York Airport four women came to see Tangaloa off: his current mistress, two ex-wives, and a miscellaneous girl friend. Tangaloa greeted them with his usual fuzzy amiability, kissed them all soundly, and strolled out to the bus.

Barnevelt, after saying good-by to the lovely quartet, followed Tangaloa, reflecting morosely that to him that hath shall be given. In looking out of the bus window to give one last farewell wave to the girls, he spotted a small gray-haired figure pushing its way to the front of the crowd.

"Zeus!" he said, quickly turning

his face away.

"What ails you, pal?" said Tangaloa. "You're white!"

"My mother!"

"Where? Oh, *that* little female! She doesn't look very formidable."

"You don't know her. Why doesn't that fool driver start?"

"Don't get off your bike. The gate's closed, so she can't get in."

Barnevelt cowered in his seat until the bus lurched into motion. In a minute they were at the ship. The companionway, like a tall stairway on wheels, stood in position. Barnevelt went up quickly, Tangaloa wheezing behind as his weight told and grumbling about elevators.

"You want syrup on your shortcake," said Barnevelt.

Now that he could no longer see individuals among the crowd at the gate, because of the distance and the gathering darkness, he was beginning to feel himself again.

Inside the fuselage they climbed down to their seats, swiveled to allow them to sit upright even though the ship for the Mohave Spaceport was standing on its tail. Barnevelt remarked:

"You sure take it coolly, leaving all those women."

Tangaloa shrugged. "There will always be another along in a minute."

"Next time you're discarding a set of such sightly squids, you might offer me one."

"If they are willing, I shall be glad to. I suppose you prefer the Pink—or as you Westerners prefer



to call it the White—Race?”

An airline employee was climbing down, rung by rung, to punch tickets. He called out:

“Is there a passenger named Dick Barnvelt on the plane?”

“I suppose you mean me,” said Barnevelt. “Dirk Barnevelt.”

“Yeah. Your mother just called us on the tower radio, saying for you to get off. You’ll have to let us know right away so we can put the companionway back.”

Barnevelt took a long breath. His heart pounded, and he felt Tangaloa’s amused eyes upon him.

“Tell her,” he croaked, “I’m staying on.”

“Good-o!” cried Tangaloa. The man climbed back up.

Then the hurricane rumble of the jet drowned all other sounds, and the field dropped away. The New York Area, spangled with millions of lights, came into view below; then all of Long Island. To the west the sun, which had set half an hour before, rose into sight again.

II.

Up ahead, around the curve of the corridor, the door of the air lock clanged open. Loud-speakers throughout the *Amazonas* began their chant: “*Todos passageiros saí*—all passengers out—*todos passageiros*—”

Dirk Barnevelt, standing beside George Tangaloa in the line of passengers waiting to disembark; automatically moved forward to close up

the distance between himself and the man in front of him. Through the invisible open door in the nose of the ship came a breath of strange air—moist, mild, and full of vegetal smells. So different from the air of a spaceship in transit, with its faint odors of ozone, machine oil, and unwashed human beings. Lighters flared as the passengers eagerly lit up their first smokes since leaving Neptune.

The line began to move forward. As they neared the lock, Barnevelt heard the rush of wind and the patter of rain over the shuffle of feet. Finally the outside world came in sight, a rectangle of pearl-gray against the darker tone of the bulkheads.

Barnevelt muttered: “I feel like a mummy escaping from its tomb. Didn’t know space travel was such a bore.”

As they neared the lock, he saw that the gray exterior was the underside of a rain-cloud driving past. The wind flapped the canopy over the ramp, and rain drove through the open sides.

As he in turn stepped through the lock, Barnevelt heard below him the thump of trunks and suitcases as grunting crewmen heaved them out the service lock into the chute beneath the ramp, and the swish of the baggage taking off down the chute. A glance over the rail startled him with the distance to the ground.

The wind thrummed through the spidery ramp structure and whipped Barnevelt’s raincoat about his knees. At the foot of the ramp he found he

still had several minutes' walk to the customs building. The walkaway with its canopy continued on little stilts across the field, an expanse of bare brown earth dotted with puddles. In the distance a scraper and a roller were flattening out the crater left by the last take-off. Behind him the *Amazonas* stood like a colossal rifle-cartridge on its base. As they walked towards the customs building the rain stopped, and Roqir showed his big yellow buckler between towering masses of cloud.

A uniformed *Viagens* man was holding open the door of the customs building and saying in the Brazilo-Portuguese of the spaceways: "Passengers remaining on Krishna, first door to the right; those proceeding on to Ganesha or Vishnu—"

Nine of the fourteen passengers crowded through the first door to the right and lined up before the desk of a man identified by a sign as Afanasi Gorchakov, Chief Customs Inspector.

When their turn came, Barnevelt and Tangaloa presented their passports to be checked and stamped and entered while they signed and thumb-printed the register. Meanwhile Gorchakov's two assistants went through baggage. When one of them came across the Hayashi ring-camera he called to Gorchakov, who examined them and asked:

"Are these equipped with destructors?"

"Yes," said Tangaloa.

"You will not let them fall into Krishnan hands?"

"Certainly not."

"Then we'll let them through. Though it is technically illegal, we make an exception because Krishna is changing, and if pictures of the old Krishna are not made now they never will be."

"Why's it changing?" said Barnevelt. "I thought you fellows were careful to protect the Krishnans against outside influences."

"Yes, but they have learned much from us nevertheless. For instance, back in 2130 Prince Ferrian of Sotaspé established a patent system in his kingdom, and it has already begun to show an effect."

"Who's he?"

"The rascal who tried to smuggle a whole technical library into Krishna in his ancestor's mummy. When we blocked that he put this patent idea into practice, having picked it up on his visit to Earth."

Tangaloa asked: "Who is counselor to visitors?"

"Castanhoso. Wait and I will present you."

When all the incoming visitors had been medically examined, Gorchakov led Shtain's men down the hall into another office harboring Herculeu Castanhoso, Assistant Security Officer of Novorecife.

When Gorchakov had left, Tangaloa explained the purposes of the expedition, adding: "Can we trust the young lady? We don't want our plans noised among the aborigines." He nodded towards Castanhoso's pretty secretary.

"Surely," said Castanhoso, a small

dark man.

"Good-o. Has anybody like Dr. Shtain come through in recent months?"

Castanhoso examined the bathygraph of Igor Shtain. The three-dimensional image stared back coldly.

"I don't think . . . wait, there was one on the last ship from Earth, one of three who said they'd been hired by the King of Balhib to survey his kingdom."

"How could they do that without violating your rules?"

"They would be limited to Krishnan methods of surveying. But even so, they said, they are still much more accurate than any Krishnan. Now that I think of it their story did sound thin, for it's notorious that ever since Sir Shurge cut off his beard, King Kir has had a mania against strangers. I'll ask him. Senhorita Foley!"

"Sim?" The girl turned, revealing large blue eyes. She looked at Castanhoso with a breathless expression, as if expecting him to reveal an infallible method of winning at swindle-bridge.

"A letter, *por favor*. From Herculeu Castanhoso, et cetera, to his sublime altitude, Kir bad-Baladé, Dour of Balhib and Kubyab, hereditary Dasht of Djeshang, titular Pandr of Chilihagh, et cetera et cetera. May it please your serene awesomeness, but the *Viagens Interplanetarias* would appreciate information respecting the following matter, namely, that is; and *videlicet*—"

When he had finished he added: "Translate it into Gozashtandou and write it in longhand on native paper."

"She must be a right smart girl," said Barnevelt.

"She is." (The girl glowed visibly at this brief praise.) "Senhorita, these are our visitors the Senhores Jorge Tangaloa and Dirk Barnevelt; Mees Eileen Foley."

Barnevelt asked: "What about the king's beard? These people must have rugged ideas of humor."

"You do not know the tenth of it. This Shurge was sent on a quest for the beard because he had murdered somebody in Mikardand. Kir was mad with rage, because Krishnans have practically no beards and it had taken him all his life to grow this one."

"I can see how he'd feel," said Barnevelt, remembering how his classmates at Teachers' College had forcibly demustached him. "When was this?"

"In 2137, just before Ferrian's stunt with the mummy and the Góis scandal."

Castanhoso told what he knew of the singular story of Anthony Fallon and Victor Hasselborg.

"What became of the Earthly King of Zamba?" asked Barnevelt.

"He disappeared, though rumor says he's captive in Gozashtand."

Barnevelt grinned at his colleague. "Maybe we ought to hunt him out and rescue him, George. That would make a good strip of film for Cosmic."

Tangaloa shook his head. "We

have enough on our schedule to keep us occupied. Besides, I've known adventurers of that type. When you get through the glamour they turn out to be pretty grasping and unscrupulous bots; not the sort you care to turn your back on."

Barnevelt turned back to Castanhoso. "What happened to Fallon's kingdom?"

"Since then Penjird, the son of the old King Penjird of Zamba who lost his head in the revolution, has overthrown Fallon's viceroy and set himself on the throne."

"Sounds as complicated as an income-tax form," said Barnevelt. "I don't remember any of this in my briefing."

"You forget, Senhor Dirk, the news had not reached Earth when you left, and that you have been traveling twelve Earthly years, objective time."

"I know. I have to keep reminding myself of the Fitzgerald effect. Actually I don't feel that much older."

"No, because physically you aren't; only three or four weeks older. You passed Chuen and Hasselborg on their way back to Earth."

Tangaloa said: "Ahem. Let us get to the point, gentlemen: How do we get to the Sunqar?"

Castanhoso walked over to the wall where he pulled down a roll map. "Observe, senhores. Here are we. Here is the Pichidé River, separating the Gozashtando Empire on the north from the Republic of Mi-

kardand on the south. Here to the east lies the Sadabao Sea. Here is Palindos Strait opening into the Banjao Sea to the south, and here is the Sunqar.

"As you see, the port closest to the Sunqar is Malayer on the Banjao Sea, but there is war in those parts and I seem to remember hearing that Malayer is under siege. Therefore you must go down the Pichidé to Madjbur, then take the railroad down the coast to Djazmurian, and thence travel by road to Ghulindé, the capital of Qirib. From there I suppose you will go by water—unless you prefer to sail to Sotáspé"—he pointed to a spot on the map far out in the Sadabao Sea—"to borrow one of Ferrian's rocket gliders.

"If you ask me how to proceed from Ghulindé, frankly I don't know how you can get into that continent of *sargaço* without at least getting your throats cut. However, you will find Qirib comparatively unspoiled by Earthly influence, and I hope you decide it is picturesque enough for purposes of cinematography."

Tangaloa shook his head. "The contract says the Sunqar. But how do we get to this Gulindé?"

"Ghulindé," corrected Castanhoso. "With a *gh*." He made a gargling sound like a French *r*.

"What we mean," said Barnevelt, "is: How do we travel? Openly as Earthmen?"

"I would not, even though some have got away with it. Our barber can give you disguises: artificial antennae, points to your ears, and

green dye for your hair."

"Ugh," said Barnevelt.

"Or, if you dislike dyeing your hair, which entails taking along extra dye for when your hair grows out, you could go as men from Nich-Nyamadze where they shave their scalps completely."

"Where's Nich-whatever-it-is?" asked Barnevelt. "Sounds as if it might be Igor Shtain's home town."

"Nich-nyah-mah-dzuh. It's in the South Polar Region, thousands of hoda from here, as you can see on this globe. You shall be Nich-Nyamen, or in colloquial speech simply Nyamen. They seldom get to this part of the planet, and if you pretended to be such, it might avert suspicion if you speak with an accent or seem ignorant of local matters."

Tangaloa asked: "Have you facilities for intensive linguistic training?"

"Yes, we have a flash-card machine and a set of recordings, and Senhorita Foley can give you colloquial speech-practice. You should spend a few days anyway brushing up on Krishman social behavior."

When they had agreed to his suggestion of going as Nich-Nayamen, Castanhoso said: "I shall give you Nich-Nyami names. Senhor Jorge, you are . . . uh . . . what are a couple of good Nyami names, Senhorita?"

The girl wrinkled her forehead. "I remember there were a couple of famous Nich-Nyami adventurers, Tagde of Vyutr and Snyol of Pleshch."

"*Bom.* Senhor Jorge, you are Tagde of Vyutr; Senhor Dirk, you are Snyol of Pleshch. Plesh-tch, two syllables. Now, do you ride and fence? Few Earthmen do."

"I do both," said Barnevelt. "Matter of fact I even tell stories in Scottish dialect."

Tangaloa groaned. "I had to learn to ride on that expedition to Thor, though I'm no horse person. But as for playing with swords, no! Everywhere except on these flopping Class-H planets you can go where you must in an aircraft and shoot what you must with a gun, like a sensible bloke."

"But this is not a sensible planet," replied Castanhoso. "For instance, you may not take that bathygraph of Senhor Shtain with you. It's against regulations, and any Krishnan who saw that three-dimensional image would know that here was the magic of the Earthmen. But you may have an ordinary photographic flat print made and take that."

"Let me see," the *Viagens* official continued. "I shall give you a letter to Gorbvast in Madjbur, and he can give you one to the Queen of Qirib, who may be willing to help you thenceforward. If she is not to know you are Earthmen, what excuse should you give for yourselves?"

Barnevelt asked: "Don't people go to the Banjao Sea on legitimate business?"

"But yes! They hunt the gvám for its stones."

Tangaloa said: "You mean that thing something like a swordfish and

something like a giant squid?"

"That is it; you shall be gvām-hunters. The stones from their stomachs are priceless because of the Krishnan belief that no woman can resist a man who carries one."

"Just the thing for you, Dirk," said Tangaloa.

"Oh, foof!" said Barnevelt. "Having no faith in the thing, I'm afraid it would be priceless to me but in the other sense. What time is it, Senhor Herculeu? We've been cooped up in that egg crate so long we've lost touch with objective time."

"Late afternoon; just about our quitting time."

"Well, what d'you do for that seventeen o'clock feeling?"

Castanhoso grinned. "The Nova Torque Bar is in the next compound. If you gentlemen—"

The greenish sky had almost cleared; the setting sun threw reds and purples on the undersides of the remaining clouds. The plain concrete buildings were arranged in rectangles whose outsides were blank wall, all the doors and windows opening onto the central courts.

In the bar Castanhoso said: "Try a mug of kvád, since that is the chief distilled liquor of Krishna."

"I hope," replied Barnevelt, "it's not made by native women chewing and spitting, the way they do where George comes from."

Castanhoso made a face. As they ordered, a high, harsh voice called out:

"Zeft, zeft! *Ghuvoí sú! Zeft!*"

Barnevelt peered around the partition between their booth and the next and saw a large red-yellow-and-blue macaw on a perch.

"That's Philo," said Castanhoso. "Mirza Fateh brought him in on the last ship, the one that also landed the man who might be your Dr. Shtain."

"Why did he leave the bird here?" asked Barnevelt.

"The regulations made us keep that bird for a quarantine period, and Mirza was in a hurry to get to a convention of his sect in Mishé. So he gave the parrot to Abreu, my chief, who gave him to me after he had bitten Senhora Abreu. You gentlemen don't need a parrot, do you?"

As the explorers shook their heads, the macaw shrieked: "*Zeft! Baghan!*"

"Somebody taught him all the obscenities of Gozashtandou," said Castanhoso. "When we have proper Krishnan guests we hide him."

Barnevelt asked: "Who's this Mirza Fateh? Sounds like an Iranian name."

"It is. He is a Cosmotheist missionary, a little fat fellow who wanders back and forth among the Cetic planets promoting his cult."

"I've been in Iran," said Tangaloa. "Hang of a country."

Castanhoso continued: "We hadn't seen Senhor Mirza for many years, since he went to Earth to get the Word from the head of his cult."

Tangaloa said: "You mean that Madame von Zschaetzsch? Who

claims to be a reincarnation of Franklin Roosevelt, and to get her inspiration from an immortal Imam who lives in a cave in the Antarctic ice cap?"

"The same. Anyway, Mirza has been working this region for over a century. A curious character; sincere, I think, in his supernatural beliefs, and kindhearted, but not to be trusted for a minute. He was caught cheating at gambling on Vishnu."

Barnevelt said: "A rogue in grain, veneered in sanctimonious theory."

"So—yes? He has his troubles too, poor fellow. A couple of decades ago, just before he returned to Earth, he lost his wife and daughter here on Krishna."

"I thought Cosmotheists were celibates?"

"They are, and I have heard Mirza explain with tears running down his fat face that his misfortune was the result of violating that taboo."

"How'd it happen?"

"They were going by train from Madjbur to Djazmurian—where you will be going—when a band of robbers ambushed the train. Mirza's wife was killed by an arrow. Mirza, who is not notable for courage, escaped by shamming dead, and when he opened his eyes the little girl was gone. No doubt the robbers took her to sell into slavery."

Tangaloa said: "Fascinating, but tell us more about Qirib."

"To be sure. Qirib is called a kingdom, but I suppose it should be 'queendom.' It's a matriarchal state, founded long ago by Queen Dejanai.

Not only do the females run the country; they have a strange custom: The queen chooses a man for her consort, and after he has served for a year they kill him with much ceremony and choose another."

Tangaloa exclaimed: "Like some early agricultural cultures on Earth! Ancient Malabar, for instance—"

"I shouldn't think," said Barnevelt, "there'd be much competition for the siege perilous. There must be an easier way to make a living, even on Krishna."

Castanhoso shrugged. "The poor men have nothing to say. They are chosen by lot, though I hear the lots are sometimes rigged. There is a movement to replace the actual execution by a symbolic one—they would just nick the outgoing king a little—but the conservatives of course object that such a change would enrage the fertility-goddess, in whose honor this gruesome ceremony is observed."

Barnevelt asked: "Is there any chance they'd choose one of us for the honor? It's one I could stand missing."

"No, no, only citizens of Qirib are eligible. However, you must take some sort of present for Queen Alvandi."

"Hm-m-m," said Barnevelt. "Well, George, I suppose the expense-account will have to take another sock—"

"Wait a spell!" said Tangaloa, looking with liquid eyes towards the macaw. "How would that cockatoo do? I don't suppose the queen has

any Earthly birds, has she?"

"Just the thing!" said Castanhoso. "It will cost you nothing, for I am glad to get rid of the creature."

"Hey!" said Barnevelt. "Much as I love animals, I'm allergic to feathers!"

"That's all right," said Tangaloa. "I shall carry the cage, and you the rest of our gear."

Castanhoso added: "You must warn the queen that Philô is not to be trusted."

Barnevelt said: "Actually he's probably grumpy because he hasn't seen a lady macaw in a long time."

"That may be, but as the nearest one is eleven light-years away, he will have to put up with it."

"How about his vocabulary? The queen might not like that *avant-garde* language he uses."

"That is nothing. She is said to have a pretty rough tongue herself."

"Come on," said Barnevelt sharply next morning. "You can't lie around digesting your breakfast all day like one of my old man's hogs."

And he bullied and dragged the unwilling Tangaloa into the Novorifice gymnasium. Although Tangaloa was nominally his superior, Dirk found he had to take more and more of the responsibility for the expedition if they were to get anywhere.

In the gym they found a stocky, balding, blue-eyed man chinning himself on a bar, who said his name was Heggstad.

"Vot do you vont? Massash?" said this one, standing on his head.

"No, some fencing," said Barnevelt.

"Going out, eh? I got yust the thing for you," said Heggstad, doing deep-knee bends. The gymnast took time out to get out a pair of masks, jackets, gloves, and épées.

"A little heavier than the Earthly épée," he explained, spreading his arms and doing a one-leg squat. "That's so it corresponds to the Krishnan rapier, which must be heavy to get through armor. You know the first principles?" he added, doing push-ups.

"Ayuh," said Barnevelt, pulling on the jacket. "Get 'em on, George, unless you want me to carve my initials in your hide with my *point d'arrêt*."

Tangaloa grumbled: "I have already informed you I'm a hopeless dub at all sports, except perhaps cricket."

"Oh, foof. You swim like a fish."

"That's not a sport, but a utilitarian method of crossing water when one has neither bridge nor boat. How do I grasp this archaic object?"

Barnevelt showed him while Heggstad did a hand-stand on a pair of parallel bars.

"I'm exhausted just observing Mr. Heggstad," said Tangaloa, holding his blade listlessly.

"Vun of these dissipated high-liversh, that's the matter vit you," snapped Heggstad, standing on one hand. "Smoking, drinking, late hoursh, all that sort of thing. If you would put yourself in my hands, I

could make a new man of you. Then you'd learn to really enjoy life."

"I enjoy it so much now I don't believe I could endure any more," said Tangaloa. "Ouch!"

"He vill never make a fencer," said Heggstad, leaping into the air, turning a somersault, and coming down on his feet again. "He has no killer instinct, that's the trouble. He takes it as a yoke."

"Of course I have no killer instinct, you Norwegian berserker!" said Tangaloa in an aggrieved tone. "I'm a scientist, not a bloody gladiator. The only time I ever smeared anybody was that time on Thor when they thought we'd stolen the sacred pie and we had to shoot our way out."

And in truth Tangaloa did not prove a promising pupil. He seemed slow, awkward, and not much interested.

"Come on, you big mass of lard," said Barnevelt. "Get that arm out! What would d'Artagnan think?"

"I don't care what any unwashed seventeenth-century European thinks, and I am not obese," said Tangaloa with dignity. "Merely well-fleshed."

After half a Krishnan hour Barnevelt gave up and asked Heggstad: "Like a few touches?"

They went at it. Tangaloa, sweating hard, sat down on the canvas with his back to the wall and watched. "A more appropriate rôle for one of my contemplative temperament; I shall observe while the

medieval romanticists perform the work."

"He is yust lazy and trying to hide it vit big vords," said Heggstad. "Now you are pretty good, even though you look kind of awkward. *Touché!*"

"Practice makes perfect," said Barnevelt, getting home again with a *doublé dégagé*. "The game George has had the most practice at won't help us on Krishna."

Heggstad said: "These Krishnans are not so good. They use a complicated drill, very formal, vit diagrams on the floor. *Touché!*"

Barnevelt finished his fencing and gave Heggstad back his gear.

Tangaloa yawned. "I presume our next objective will be to rout out Castanhoso for advice on equipment."

Castanhoso said: "Do not apologize! This is part of my job."

"Can I come?" said Eileen Foley, casting sheep's eyes at Castanhoso.

"So—yes," said Castanhoso, and led them out of his office, across the compound, and into the Outfitting Store, where they were met by the first Krishnan whom Barnevelt had seen close up.

The young fellow looked superficially human, though his bright-green hair, large pointed ears, and smelling-antennae sprouting from between his eyebrows made him look as if he had stepped out of an Earthly children's book about the Little People. As Barnevelt scrutinized the Krishnan he began to no-

tice other little differences as well—details of color and shape of teeth, fingernails, eyes, and so on. The Krishnan was small compared to Barnevelt, but wiry and well-muscled, with a scar on his face that crossed his flattish nose diagonally.

"This is Vizqash bad-Murani, one of our tame Krishnans," said Castanhoso. "He will sell you any outfits you need. Vizqash, these gentlemen are going out as Nich-Nyamen."

"I have just the thing, gentlemen," said the Krishnan in a curious rasping accent. With immense dignity he led the way to a rack of bright fur-lined suits that might have been made for a squad of Earthly département-store Santa Clauses.

"Oh, no!" said Castanhoso. "I didn't mean they were going to Nich-Nyamadze. They are going to Qirib, which is much too hot for those!"

"To my old country?" said the Krishnan. "They don't wear *clothes* there!"

"You mean they go naked?" asked Barnevelt in alarm, for he had been brought up as a non-nudist and did not regard his own long knobby form as a thing of beauty.

"No, except for swimming," said Castanhoso. "He means the Qiribuma do not tailor clothes to fit them as we and the Gozashtanduma do. They wrap a couple of squares of goods around themselves, pin them in place, and consider themselves dressed. Of course if you go farther south you find Krishnans who regard any clothes as indecent."

Eileen Foley said: "Boy, I'd like

to see you disguised as one of those!"

"You'd be disappointed," said Barnevelt, blushing.

"How d'you know what I'd expect?"

"I only look more like a horse than ever." A fresh little snip, thought Barnevelt.

Castanhoso warned: "Stay away from such people, because you couldn't fool them as to your species. I think the best thing would be summer-weight Gozashtando suits."

"Size forty-four long," added Barnevelt.

Vizqash accordingly brought out outfits comprising tight jackets, leg-wear somewhere between divided kilts and longish shorts, trunk-hose to go under these, calf-high soft-leather boots, and stocking caps whose tails were designed to be wound turbanwise around the head.

"When you get to warmer country you can go without the hose," said Vizqash. Staring at Tangaloa he added "I fear we have nothing large enough for you. I shall have to have our tailor—"

"Here's a big one," said Barnevelt, rummaging.

"*Ohé*, I had forgotten! A hundred-kilo Earthman ordered it and then died before we could deliver."

Tangaloa put the suit on, and Barnevelt said: "George, you're a sight to shake the midriff of despair with laughter."

"At least my knees aren't knobby," retorted the xenologist.

"Now for arms and armor," said Castanhoso.



"This way," said Vizqash. "If you could tell me just what you plan to do—"

"Observing people and customs," said Barnevelt. "A general xenological survey."

"You want to know things like Krishnan history and archeology?"

"Yes, and also ecology, sociodynamics, and religion."

"Well, why not start by visiting the ruins west of Qou? That is only a short way from here; big ruins with inscriptions nobody can read. Nobody knows who built them."

"Let's all go there tomorrow for a picnic," suggested Eileen Foley. "It's Sunday, and we can borrow the big V. I. rowboat."

Barnevelt and Tangaloa looked questioningly at one another.

"A good idea," said Castanhoso. "I cannot go, but it will give you two practice at being Krishnans. I suggest that Vizqash go along as your guide."

Barnevelt suspected that Castanhoso was politely urging them to get out of his hair, but saw no objections. When the details of the picnic had been settled, he let Vizqash sell him an undershirt of fine link mail, a rapier, and a dagger. Tangaloa balked at the sword.

"No!" he said. "I'm a civilized man and won't load myself down with primitive ironmongery. Besides, where we're going, if I can't talk us out of trouble it's unlikely we shall be able to fight our way out either."

"Anything else?" asked Vizqash.

"I have some fine curios; charms in the form of the Balhíbo god Báh. You can wear them anywhere but Upper Ghera, where it's a capital offense. And Krishnan books: dictionaries, travel books—"

"What's this?" inquired Barnevelt, untying the string that held together the two wooden covers between which a book, a single long strip of native paper, was folded zigzag. "Looks like a Mayan codex."

"A navigational guide published in Madjbur," said Vizqash. "It has tables showing the motions of all three moons, the tides, the constellations, an almanac of lucky and unlucky days . . ."

"I'll take it."

They paid, made a date with Miss Foley for a language lesson, and departed for the barber shop to receive their disguises.

III.

In charge of the *Viagens* boat-house was a tailed man from the Koloft Swamps, hairy and monstrosly ugly. Eileen Foley handed him a chit from Commandante Kennedy and inquired:

"Any robbers on the Pichidé lately, Yerevats?"

"No," said Yerevats. "Not since great battle. I there. Hit robber on head, like this—"

"He tells that story to everybody who'll listen," said Eileen Foley. "Let's take this boat."

She indicated a rowboat with semicircular hoops stuck in sockets

in the thwarts, forming arches over the hull.

"Why not that one?" asked Tangaloa, pointing to a motorboat.

"Good heavens, suppose it fell into the hands of the Krishnans! That's for emergencies only."

Barnevelt stepped into the boat and held out a hand to Miss Foley. Vizqash climbed in holding his scabbard. The boat settled markedly as Tangaloa added his weight to the load. Yerevats handed down the lunch basket, untied the painter, and pushed them out of their slip with a boathook.

As they emerged into the open, Tangaloa said: "While I'm no-ringer on the local meteorology, I should hazard a conjecture that rain in the near fut—"

A crash of thunder drowned the rest of the sentence, and a patter of large drops made further comment unnecessary. Vizqash got a tarpaulin out of a compartment in the bow, and they wrestled it into place over the arches.

"The wettest summer since I was hatched," said the Krishnan.

Tangaloa said: "Whoever takes the tiller will get wet, I fear."

"Let Vizqash," said Barnevelt. "He knows the way."

Grumbling, the Krishnan wrapped himself in his cloak and took the tiller while the Earthmen unshipped the oars. Tangaloa took off the camera-ring he was wearing and put it in his pocket. He said:

"This reminds me of a picnic I attended in Australia."

"Is that a place on your planet?" asked Vizqash.

"Right-o. I spent some years there; went to school there in fact."

"Did it rain on this picnic, too?"

"No, but they have ants in Australia. That long with a sting at both ends—"

"What is an ant?"

By the time the Earthmen had explained ants, the rain had stopped and Roqir was again shining in a greenish sky crowded with deeply-banked clouds. They threw back the tarpaulin. The current had already carried them down the Pichidé out of sight of the Novorecife boat-house. Presently they came to the end of the concrete wall that ran along the north bank of the river and protected Novorecife from surprise.

Tangaloa said: "Tell us about Qirib, Senhor Vizqash, since you come from there."

"Stay out of it," rasped Vizqash. "A . . . how do you say? . . . lousy country. The women's rule has ruined it. I escaped many years ago and don't intend to go back."

The terrain along the south bank became lower until all that could be seen between water and sky was a dark-green strip of reeds, with odd-looking Krishnan trees here and there.

"That's the Koloft Swamp, where Yerevats' wild relatives live," said Eileen Foley.

Tangaloa looked at his hands, as if fearing blisters, and said: "It will

not be so easy rowing back upstream as down."

"We shall come back along the edge of the river, where the current is weak," said the Krishnan.

A V-shaped ripple, caused by some creature swimming under water, cut swiftly across their bow and disappeared in the distance.

Barnevelt asked: "Are we going all the way to Qou?"

"No," said Vizqash, "there is a landing on the south side before we reach Qou."

A pair of aqebats rose squawking from the reeds, circled on leathery wings to gain altitude, and flew away southward. Vizqash now and then let go the tiller-ropes to slap at small flying things. "One nice thing," said Miss Foley, "the bugs don't bother us. Our smell must be different from poor Vizqash's."

"Maybe I should go to your planet where they would not bother me either," said the sufferer. "I see our landing."

The reeds along the south side of the river had given place to low brown bluffs, two or three times the height of a man.

"How d'you tell time?" said Barnevelt. "Castanhoso wouldn't let us bring our watches."

Vizqash unclasped a bracelet from his arm, clicked it shut again, and dangled it from a fine chain. "It is the ninth hour of the day lacking a quarter, or as you would say three-quarters of an hour past noon, though since your days and hours are

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different from ours I do not know what the exact equivalent would be. The sun shines through this little hole-onto these marks on the inside, as it did through the arrow-slot in the haunted tower in the romance of Abbeq and Dángi. Perhaps I could sell you one of these back at Novorecife?"

"Perhaps." Barnevelt shipped his oars and hunkered forward. A simple pier extended out into the river at this point, made of a stockade of short logs with a gravel fill. Two other boats, of obvious Krishnan design, were tied to it with large padlocks. From the pier a narrow dirt road ran back inland through a notch in the bluff. As the *Viagens* craft nosed in to shore, a couple of small scaly things slipped into the water with slight splashes.

When they had climbed out and secured the boat, Vizqash led them up the road, which curved left towards Qou. Something roared in the distance, and the small animal-noises, the rustlings and chirplings from the vegetation lining the road, stopped.

"It is all right," said Vizqash. "They seldom come this close to the village."

Barnevelt said: "Don't you wish you'd brought a sword now, George? without mine I'd feel like a lawyer without his brief case."

"With you and Vizqash to protect me I'm sweet enough. Here, you carry the basket."

Barnevelt took the basket, wishing he had the gall always to hand the

heaviest burden to somebody else. The heat and the roughness of the path soon left them little breath for chatter.

Finally Vizqash said: "Here we are," and pushed through the shrubbery on the left side of the road.

They followed him. Since the country was of open savannah type, they found the going not too difficult. After some minutes they came to an area like a terminal moraine, strewn with stones and boulders. As Barnevelt looked he perceived that the stones were of unnaturally regular sizes and shapes and arranged in rows and patterns.

"Up here," said Vizqash.

They climbed a conical heap, the remains of a circular tower long fallen into a mass of rubble, but affording a view of the whole area. The ruins extended to the river. A fortress or fortified camp, Barnevelt surmised.

"Here," said Vizqash, pointing to the remains of a statue thrice life size. The pedestal and one leg still stood, while among the rocks and boulders scattered about the base Barnevelt could make out a head, part of an arm, and other pieces of the statue. He remembered:

"I met a traveler from an antique land

Who said: Two vast and trunkless legs of stone

Stand in the desert— Near them, on the sand,

Half sunk, a shattered visage lies,
—whose frown,

And wrinkled lip, and sneer of cold
command,
Tell that its sculptor well those pas-
sions read
Which yet survive, stamped on these
lifeless things—”

“What are you muttering?” said
Eileen Foley.

“Sorry,” said Barnevelt. “I was
just remembering—” and he recited
the sonnet.

Tangaloa said: “That’s by those
English blokes Kelly and Sheets, is
it not? The ones who wrote ‘The
Mikado’?”

Before Barnevelt had a chance to
straighten out his colleague, Viz-
qash broke in: “You should know
the great poem of our poet Qallé,
about a ruin like this. It is called
‘Sad Thoughts—’”

“How about some tucker?” said
Tangaloa. “That row has given me
an appetite.”

“It is called,” said Vizqash firm-
ly, “‘Sad Thoughts Engendered by
Eating a Picnic Supper in the Moss-
Covered Ruins of Marínjíd, Burned
by the Balhíhuma in the Year of
the Avval, Forty-Ninth Cycle After
Qarar.’”

Tangaloa said: “With all that
title, I’m sure we shan’t need—”

But the Krishnan burst into roll-
ing, guttural Gozashtandou verse,
with sweeping Delsartean gestures.
Barnevelt found that he could catch
perhaps one word in five.

Tangaloa said to Eileen Foley:
“That’s what we get for going out
with a pair of poetry enthusiasts.

If you’d care to take a walk with
me while they get it out of their sys-
tems, I’m sure I can find some more
entertaining—”

At that moment Vizqash ran
down, saying: “I could go on for an
hour, but that gives you the idea.”

He then elected himself chef and
rummaged for dry wood. Although
his pile of twigs did not look prom-
ising, he picked some weedy plants
with pods. He broke these open and
shook a fine yellow dust onto his
heap of sticks.

“We use this powder for fire-
works,” he explained.

He got out a small cylinder with
a piston that fitted closely into it
and bore a large knob at its upper
end. From a small box he shook a
pinch of tinder into the cylinder, in-
serted the piston into the open end
of the cylinder, and smote the knob
with his palm, driving the piston
down into the cylinder.

“I like these better than those
mechanical flint-and-steel lighters
such as the one you bought,” he
said. “There is less to get out of
order.”

He took the piston out of the cyl-
inder and shook smoldering tinder
onto the fire. The fragments lighted
the yellow powder which blazed up
with crackling sounds and ignited
the rest.

Meanwhile Eileen Foley laid out
the contents of the basket. From
among these Vizqash took a package
wrapped in waxed paper. When the
paper was unwrapped, there came

into view four jointed creatures something like small crabs and something like large spiders.

"This," said Vizqash, "is a great delicacy."

Barnevelt, gulping, felt Tangaloo's amused eyes upon him. The Samoan ate everything, but he, Barnevelt, had never developed the catholicity of taste that marks the true traveler. However, he controlled his features; they might have to eat odder things yet. If he had thought of this aspect of interplanetary exploration sooner, though, he might have put up a stouter resistance to the project.

"Fine," he said with a weak smile. "How long will they take?"

"Five or ten minutes," said Vizqash. He had fitted together a wire grill so that his four bugs were inclosed between the two grids. They sizzled and sent up a sharp smell as he toasted them.

From the direction of the road a dozen flying creatures rocketed up out of the shrubbery with hoarse cries. Barnevelt idly watched them fly away, wondering if some prowling carnivore had disturbed them. The small animal-noises seemed to have died down again.

"Vizqash," he said, "are you sure there are no more bandits around here?"

"Not for years," said the Krishnan, jiggling his grill over the fire and poking additional twigs into the flames. "Why do you ask?" he added sharply.

Tangaloo, aiming his Hayashi at

bits of ruin, said: "Let's walk down towards the river, Dirk. There is some solid-looking masonry at the end of the block."

"These will be ready soon," said Vizqash in tones of protest.

"We're not going far," said Tangaloo. "Call us when they're nearly done."

"But—" said Vizqash, in the manner of one who struggles to put his wishes into words.

Tangaloo started for the river, and Barnevelt followed. They picked their way among the rocks to the north end of the ruin, on the top of a low bluff sloping down to the water. Near the line of the boundary wall stood a big slab, half sunk in the earth and leaning drunkenly, its face covered with half-obliterated carvings.

Tangaloo shot a few centimeters of film, saying: "In a couple of hours the sun will bring out these carvings—"

Barnevelt looked back towards the fire, and paused. Vizqash was standing up and waving an arm.

"I think he wants us—" Barnevelt said, and then realized that the Krishnan was waving his arm as if beckoning to somebody on the other side, towards the road.

"Hey!" said Barnevelt. "Look, George!"

"Look at what?"

"What's that moving in that copse?"

"What? Oh, I suppose some local friends of his—"

A group of men had come out of

the copse and were running up towards the fire. Vizqash was saying something to them. Barnevelt could hear his voice but could not make out the rush of Krishnan words.

"They don't look friendly to me," said Barnevelt. "We may have to fight or run."

"Nonsense, cobber; you're being romantic—"

All the men, including Vizqash, started running towards the two Earthmen, swords in hands, all but one who carried a bow instead.

"Blind me," said Tangaloa, "it does look like trouble!" He picked up a couple of softball-sized stones.

Barnevelt put his back to the wall and drew his sword. Although the blade came out with a satisfying *wheep*, it occurred to Dirk that reading an historical adventure story about a dauntless hero fighting with archaic weapons against desperate odds is by all means a more satisfactory occupation than trying to enact the rôle in person.

It also struck him that something was drastically wrong with the picture. Eileen Foley had been standing across the fire from Vizqash when he beckoned his friends out of the bushes. She had continued to stand there, without sign of alarm or excitement, as they ran past her, paying her no more heed than one person pays another in a subway crush. Now she was trailing them towards the river at a walk.

"Drop your sword!" cried Vizqash. "Put down those stones and

you shall not be hurt!"

"What kind of picnic d'you call this?" asked Barnevelt.

"I said, give up your weapons! Otherwise we will kill you."

The men—nine counting Vizqash—halted out of reach of Barnevelt's blade. After all he and his companion were both well over average Krishnan stature.

"And if we do?" said Tangaloa softly.

"You will see. You must go with these men, but no harm shall come to you."

"Please give up," said Eileen Foley from behind the Krishnans. "It's the best way."

"We have given you your chance," said Vizqash. "If anybody is hurt it will be your fault."

Barnevelt said: "What's your connection with this, Eileen?"

"I . . . I—"

"*Manyoi chi!*" cried Vizqash in his harsh voice, switching from Portuguese to his native Gozash-tandou.

However, instead of all rushing in at once—which would have ended the encounter right then—the men inched forward, looking at one another as if each were waiting for the other to take the first shock.

Tangaloa let fly one of his stones with a mighty heave.

"*Mohoi raf!*" shrieked Vizqash.

Crunch! The stone struck the archer in the face just as he was reaching back over his shoulder for an arrow. He fell backwards, his face a mask of blood.

Barnevelt, scared but determined, remembered the old platitude about the best defense. He accordingly launched a furious *attaque-en-marchant* at the nearest Krishnan. Eileen Foley screamed.

Tangaloa threw his second stone at Vizqash—who ducked—and stooped to pick up another.

Barnevelt caught his opponent's blade in a whirling *prise* and drove him backwards. The Krishnan stumbled on a stone and fell sprawling. As he started to sit up, Barnevelt ran him through the body.

At that instant Barnevelt felt a sharp pain in his left side, towards the rear, and heard the sound of tearing cloth. He spun. He had driven right through the line of foes, one of whom had thrust at him from behind. He parried a second thrust and knocked up a blade coming at him from still another direction. He knew that even a much abler fencer than he would stand no chance against two at once.

Tangaloa had thrown another stone and vaulted to the top of the wall. Three Krishnans were running towards him and in a couple of seconds would skewer him.

"Run!" bellowed Tangaloa, dropping off the wall to the slope below.

Two Krishnans were threatening Barnevelt, and others were crowding forward. Since Eileen seemed to be on the other side in this game, he could leave her with a clear conscience.

One Krishnan stood directly between him and the wall; the other

was boring in from his right. Barnevelt threw himself forward into a *corps-à-corps*, and during the instant that his antagonist's body shielded him he punched the man with his left fist, hard and low. As the Krishnan started to double up, Barnevelt shoved him out of the way and leaped to the top of the wall, just as a sweeping slash from another sword carried away his cap.

Tangaloa was already halfway down the slope and, to Barnevelt's right, several Krishnans were climbing over the wall in pursuit. Barnevelt jumped off the wall and bounded down the slope in giant strides, his heels sinking into the loose earth at each step. Ahead of him Tangaloa kept right on through the reeds that bordered the river, his boots swishing through the plants, and into the river itself.

Barnevelt knew he was too encumbered to swim well, but the Krishnans would hardly hold off while he sat down to wrestle with his boots. He threw his sword at the nearest, cast aside baldric and scabbard, and plunged in after his colleague, who was already wallowing swiftly out towards midstream like an overdressed porpoise.

Whsht-plunk! Something struck the water beside Barnevelt. A glance back showed that one of the Krishnans had picked up the bow of the man whom Tangaloa had downed with the first stone, and was shooting from the top of the wall. Eileen Foley was looking on while Vizqash

ran about waving his sword and shouting orders.

Whsht-plunk! A couple of Krishnans at the edge of the water were throwing off coats, shoes, and other impedimenta.

"Duck!" Barnevelt called to Tangaloa, who immediately disappeared.

Barnevelt did likewise. Through the water the sandy bottom, little over wading depth, could be seen below. Water plants waved gently in the current.

When Barnevelt began to yearn for air he drove himself back up to the surface, shaking his head to throw nonexistent hair out of his eyes. He glanced back. Half a dozen Krishnans, it seemed, were stripping to swim or were already splashing into the water after him. Ahead, Tangaloa's big brown head broke the surface, puffing like a grampus.

Whsht-plunk! Barnevelt took a deep breath and ducked under again. The bottom was now almost invisible, meters below. Another arrow darted down into the water near him from the quicksilver surface above, trailing a comet tail of bubbles. It lost speed within a meter and drifted back up to the surface where it hung, point downward, like a little buoy.

This time he came up out of effective range. However, five or six Krishnans were now swimming out from shore, plodding along with sedate breast strokes. The current had already carried Barnevelt and Tangaloa quite a way downstream.

Barnevelt had no great fear of Krishnans in the water; he was a good swimmer and Tangaloa a superb one. But—

"George!" he called. "If we let those buggers follow us to the north side, they'll get us sure."

Tangaloa spat water. "We could wait in the shallows and stoush them as they crawl out."

"Then they'll spread up and down stream, so while we're conking one the others would get to shore. How about taking care of them right here?"

"Can you swim back to the first one under water?"

"I think so."

"All right; you take number one."

Tangaloa went under in a porpoise roll, his feet showing momentarily. Barnevelt followed suit and swam towards the nearest pursuer. Ahead of him Tangaloa barreled along, gaining fast and heading for the second.

From below the pursuers looked like headless men. Barnevelt planned how to meet his antagonist. The man had stripped down to his underwear; a kind of diaper that flapped about his loins as he swam. The hilt of the Krishnan's dagger protruded from the waistband of this garment.

Barnevelt kicked himself into position below and in front of this Krishnan and then, as his natural buoyancy wafted him upwards, drew his own dagger. He had timed his approach carefully, and as the man came overhead he brought his legs



together in a scissor kick and drove his dagger into the other's belly.

At once the water became dark with blood and opaque with bubbles as the man thrashed wildly. At that instant Tangaloa seized the ankles of the second swimmer and dragged him under.

Barnevelt thrust his head out for a long breath beside the man he had stabbed. The other swimmers were all looking towards the scene with alarmed expressions. By now they had all drifted downstream out of sight of the ruin.

The stabbed man, lying limply face-down on the surface, was beginning to slide under. Tangaloa's head bobbed up near where he had pulled the second man under, but of his victim there was no sign.

"Take the next two?" said Tangaloa.

The other Krishnans, however,

all turned and splashed back for the shore whence they had come. Barnevelt and Tangaloa struck out for the north side of the river. A long swim, but they could now take their time about it. They shed their outer clothing.

"Good thing they didn't have the rowboat handy," said Barnevelt. "A rowboat's as good as a cruiser if the other guy's swimming."

"What's back of this?" said Tangaloa. "The sheila seemed to be in with the push."

They swam silently until the bottom again came into sight below them, and presently they waded out and sat down on a log to rest. Their pursuers had disappeared.

Barnevelt said: "Hey, you're cut, too!"

Tangaloa looked at the wound on his left arm. "A scratch; let's see yours."

Barnevelt's own wound had begun to throb painfully, and blood was still flowing since it had not had a chance to dry. Examination, however, showed that the point of the Krishnan sword had slid along a rib instead of going between the ribs into the vitals.

Tearing his shirt into strips for a bandage, Barnevelt said: "Next time maybe you'll bring a sword. You can't buckle a swash with your bare hands."

"Maybe. But if we had worn those mail shirts, we should have drowned. I wonder what those blokes will do now? They can't go back to Novorecife, knowing we shall be along to accuse them."

Barnevelt shrugged. "Unless they have cooked up some fancy tale, to the effect that we're janru smugglers, or— Matter of fact, d'you suppose this is what happened to Igor?"

"It might be."

"Let's think about it. Meanwhile there sinks that nebulous star we call the sun, and we'd better shove before the dragon wing of night o'erspreads the earth."

"That energy of yours," groaned Tangaloa, heaving his bulk to his feet. "Always rush, rush, rush. We Polynesians are the only people who know how to live."

The guard said: "Wait till I call the River Gate to confirm your story."

The River Gate did indeed confirm the fact that Messrs. Barnevelt and Tangaloa, alias Snyol of Pleshch

and Tagde of Vyutr, had gone out through the gate the morning past, on their way to a picnic with Miss Foley of the Security Office and Mr. Vizqash of the Outfitting Store. What did these gentlemen look like?

"Pass on in," said the guard at last. "Anybody can see you're Earthmen."

"Is it as obvious as that?" said Tangaloa to Barnevelt. "Come to think of it, one of your feelers is coming loose. Better give the barber hell."

Barnevelt replied: "I'm more interested in giving Vizqash and the fair Eileen the wholesome boon of gyve and gag."

"Oh, them? I've forgiven them already. It is rather amusing to look back upon."

"As amusing as a funeral on Christmas Eve! I'm going to Castanhoso's office."

Barnevelt marched through the settlement, ignoring stares at his half-naked state, until he came to the compound next to the spaceport where the Security Force had its offices.

He strode in the front entrance and down the hall to Catsanhoso's office. The door was ajar, and he was about to stalk in when the sound of voices from within stopped him. He held up a hand to halt Tangaloa, lumbering behind.

"... we warned them," said the voice of Vizqash, "but no, they said they had not swum since leaving Earth. So they threw off their clothes and jumped in, and the next we

knew one of them screamed and disappeared, and then the other did likewise."

"It was awful," said Eileen Foley's voice, quivering with pathos and sincerity.

Castanhoso could be heard clucking. "This will cause no end of trouble. These Earthmen were important people, and I liked them personally. And the forms we shall have to fill out! It is odd, though, that both should be taken; one at a time is all an avval usually seizes."

"Unless there is a pair in the Pichidé," said the Krishnan.

"True, but that does not bring back those splendid—"

Barnevelt stepped into the room, saying: "I'm glad our loss isn't permanent, Senhor Herculeu. The picnic was called because of a rain—of arrows. Actually—"

Eileen Foley jumped up with a shriek like that of a Vishnuvan siren-squirrel. Vizqash leaped to his feet also with a resounding oath and ripped out his sword.

"It shall be permanent this time!" he yelled, rushing upon the two Earthmen in the doorway.

Barnevelt had a flash of panic. His dagger would be of little use against the sword; the nearest chair was out of reach; if he stepped back he would merely bump into George. He could neither run nor fight, and after preserving his life with such effort he was now liable to lose it through a trivial lack of precaution—

The point of the rapier was a bare meter away, and Barnevelt was

drawing his knife as a last resort, when a pistol-shot crashed deafeningly. The Krishnan's sword spun out of his hand and clattered across the room. Vizqash was left standing weaponless, wringing his hand and looking foolish.

Castanhoso rose with the pistol he had snatched from his desk drawer in his hand.

"Do not move, *amigo*," he said.

The hall outside was suddenly full of people, male and female, human and Krishnan, uniformed and in civilian clothing, all jabbering. Vizqash assumed the air of an insulted grandee.

"My good Castanhoso," he said, "instruct your men to treat me with due respect. After all I am who I am."

"Precisely," snapped Castanhoso. "Lock him up."

The long Krishnan day had ended, when Barnevelt and Tangaloa were finally dismissed. Castanhoso said:

"Get dressed, senhores, and have dinner; I must grill the prisoners. Shall we meet in the Nova Iorque afterwards?"

"Fine," said Tangaloa. "I could utilize a bit of tucker; we never did consume that lunch."

Two and a half hours later the explorers, back in Earthly garb and improved by a much-needed meal, were sitting in the bar. Barnevelt had suffered a delayed fright-reaction from his experience, and had been on the verge of throwing up the expedition and his job. But

Tangaloa had garruled cheerfully throughout dinner without giving him an opening, and now the feeling had gone. They saw Castanhoso enter, look around, and come to their booth.

"She has broken down," the Brazilian chortled.

"I hope you weren't brutal with the poor little squid," said Tangaloa.

"No, no, merely some sharp questioning under the metapolygraph. She does not really know who this Vizqash is, if that is his real name which I doubt, but she thinks he is one of the janrú ring. Everybody suspects everybody of smuggling janrú nowadays."

Barnevelt grunted assent while lighting a Krishnan cigar. Though he had always smoked cigarettes and pipes, he would have to learn to like cigars here.

"Why was Miss Foley involved?" asked Tangaloa. "Such a bonzer little sheila—"

"That is a strange story," said Castanhoso, looking at his fingernails with an expression of embarrassment. "It seems that she was . . . ah . . . in love with . . . uh . . . me, of all people; though she had plenty of admirers and knew perfectly well I was married."

"And you loathed the bright dishonor of her love?" said Barnevelt with a grin.

"It is not funny, my dear sir. This Vizqash had promised her a bottle of perfume doped with janrú to use on me. All she had to do was come along on this picnic, and after you

two had been disposed of, go back to Novorecife and confirm his story about the avval."

"What's that?" asked Barnevelt.

"A great snaky thing that lives in water. You can call it a giant armored eel or a legless crocodile. There has been one in the Pichidé for some time; only last week it carried off a woman of Qou."

"Guk! You mean we went swimming with *that*?"

"Yes. I should have warned you. After Vizqash had sent his men in pursuit of you—I suppose he did not tell them about the avval—you swam so far out you could no longer be clearly seen from shore. Then they came back, saying that two of their number and both of you had perished. I imagine they lied because they feared that if they told Vizqash the truth he would be angry and withhold their pay. But, if they had told him the truth, he and Miss Foley would not have rowed back to Novorecife with that story about the avval."

"What will they do with the poor little thing?" said Tangaloa.

Barnevelt said: "George, I find your sentimental solicitude for this young Lady Macbeth tiresome."

"You are merely maladjusted, Dirk. What will they do?"

Castanhoso shrugged. "That is up to Judge Keshavachandra. Meanwhile you had better replace your lost equipment and find another language teacher."

They settled the details of their passage to Qirib: by boat down the

river to Madjbur, by rail to Djazmurian, and by stagecoach thence to fabulous Ghulindé.

"With that macaw making me snifle," said Barnevelt. "And then we face the foam of perilous seas in fairy lands forlorn."

"Well," said Castanhoso, "do not go swimming in them until you know what sort of swimming companions you have. Here is to your success."

"By the way," said Barnevelt, "what does Vizgash himself say?"

"I do not know yet. This will be much more difficult, because the metapolygraph will not work on Krishnans." The Brazilian looked at his watch. "I must get back to question this rascal— Yes?"

Another man in the Security Force uniform had come in, and now whispered in Castanhoso's ear.

"*Tamates!*" cried Castanhoso, leaping up and clapping a hand to his head. "The unspeakable one has escaped from his cell! I am ruined!"

And he rushed out of the Nova Torque Bar.

IV.

Again the dark-green rampart of reeds that marked the Kolóft Swamp slid past Dirk Barneyvelt and George Tangaloo. This time, however, they lounged on the bow of a river barge, the *Chaldir*, which wafted down the Pichidé on the convection of the current and the pull of a single triangular sail slung at the bow from one stubby mast. The prevailing westerly carried the smoke of their cigars down the river. Less wel-

comely it also brought them the smells of the cargo of green hides and of the team of six-legged shaihans on the fantail, who at the conclusion of the journey would pull the boat back upstream by the towpath. They chain-smoked to offset the stench.

Now came into view the landing where they had tied up on the ill-omened picnic the week before, and then the ruin, still keeping to itself whatever secret it harbored. Then Qou, small and squalid, opened into view on the south bank and as quietly glided out of sight again.

"*Zeft! Ghuvoí zu!*" shrieked Philo the macaw from his cage.

Barnevelt, practicing lunges, said: "I'm still surprised how human these Krishnans seem to be."

Tangaloo had weakened to the point of buying a mace, half a meter long, with a stout wooden shaft and a spiked iron head. The shaft he had now stuck through his belt. He sat crosslegged like a large bronze Buddha with his back against their duffel bag, looking, with his brown skin and Mongoloid cast of features—Dirk thought—considerably more authentically Krishnan than he himself.

Tangaloo cleared his throat, indicating that a lecture was taking form, and began: "That has been figured out, Dirk. A civilized species must have certain physical characteristics: eyes to see and at least one arm or tentacle to manipulate with, for instance. And it can't be too large or too small. Well, it works out

similarly with mental characteristics. Intelligence alone is not sufficient. If the species is too uniform in its mental qualities, it won't achieve the division of labor needed for a high culture; while if it's too variable, the smart ones will tyrannize too easily over the rest; which again results in a static society. If they're too erratic or maladjusted, they will be unable to co-operate, whereas if they are too well-adjusted, they won't produce schizoid types like you to create new ideas."

"Thanks for the implied compliment," said Barnevelt. "Any time I feel the stirrings of genius I'll let you know."

"Even so," continued Tangeloa, "there is much variation among extraterrestrials; like those things on Sirius Nine with their antlike economy. It just happens that of all intelligent species the Krishnans are the most humanoid—"

"*Har 'immá! Har 'immá!*" screamed Philo.

"If that actually means what I think," said Barnevelt, "Queen Alvandi will have to be pretty broad-minded to put up with it."

"She may not even understand him. The Qiríbo dialect differs a lot from standard Gozashtandou, you know; it preserves the old distinction between *ó* and *ou*, for instance, and the middle voice in verbs—"

Barnevelt ended his practice and went forward to look at the shaihans—with whom he had made firm friends—and to scratch their shaggy foreheads.

At night they anchored in the shallows, there being no settlement near. Roqir sank beneath the low horizon in the polychrome glory of a Krishnan sunset, the master's wife prepared the evening meal, the night-noises of the small things that lived in the reeds came over the water, and the boatmen set up their little altars and prayed to their various gods before turning in.

So passed the days while they followed the Pichidé as it wound across the Gozashtando Plain on its leisurely way to the Sadabao Sea. They considered how they should approach Gorbóvast in Madjbúr, and Queen Alvandi in Ghulindé, and what means they should employ to overcome the perils of the Sunqar. Dirk Barnevelt acquired a sunburned nose, the knack of wearing a sword without getting fouled up in it, a fair facility with his new languages, and a certain hard self-confidence he had never known on Earth.

He wryly debated with himself whether this feeling came from a chance to indulge a long-suppressed romanticism; a chauvinistic feeling of superiority to the Krishnans; or simply getting away from his mother. He was relieved to discover that his killing of two Krishnans brought on no violent emotional reaction, then or later. On the other hand he suffered occasional nightmares wherein he fled, yelling for his mother, from a swarm of huge hornets.

He knew, however, that it did no good to unburden himself to Tanga-

loa, who would merely make a joke of his Hamletesque broodings.

While George had a remarkable mind—he showed an amazing flair for languages and had soaked up a great deal of xenological lore—he would not bother with anything he found hard—like working when he did not feel like it—perhaps because some things were so easy for him, or perhaps because of his indulgent Polynesian upbringing. Though kind and good-natured in a vague impersonal way, he had no emotional depth or drive; brilliantly superficial, a facile talker but a feeble doer, and no man to lead enterprises of great pith and moment. Barnevelt was sure that, though George was older than he and his nominal superior, the whole responsibility would sooner or later come to rest upon his own bony shoulders.

At last the river broadened out until from one side the houses on the other were as matchboxes, and the folk as ants. The *Chaldir* followed the right bank past the villas of the rich of Madjbur, whose young played piggy-back polo on the lawns or pushed each other off the docks with shrieking and loud laughter. Here much water-traffic was to be seen: anchored rowboats with men fishing from them; another river barge like their own, wallowing across the river under sail to set her team ashore on the towpath on the northern side.

Since the tubby *Chaldir* had but

small powers of maneuver, the master asserted his right-of-way by banging a gong of dented copper whenever they neared another vessel. They almost collided with a timber-raft which, being even less agile, drifted tranquilly in their path until the raftmen and the *Chaldir's* crew were forced to hold off from each other with poles, shouting abuse until the Earthmen half expected the two crews to fall upon each other with knives, and the shaihans in the stern bellowed uneasily. However, once the barge had been poled around the raft so that the way again lay clear, all passed off amiably enough.

The villas gave way to suburbs and the suburbs to the central city: with neither the onion-domed opulence of Hershid nor the frowning gray fortress-look of Mishé, but a character of its own—a city of many graceful arches with intricate and fantastic carvings, buildings of five and six stories, and a seething timeless traffic tangle.

Along the shore appeared wharves and piers at which were tied up many barges like their own. Beyond them Barnevelt saw the spiky tangle of masts and spars of the port's deep-water shipping. The *Chaldir's* master, spotting a vacant place, brought his craft angling in to shore, a couple of her people grunting at long sweeps to counteract the current. A fishing craft with sails sprouting at all angles, like a backyard on Monday, had marked the same parking space and tried to nose out the barge, but

not quickly enough. Philo the parrot added screeches to the imprecations of the crews of the two vessels.

The sun was high in the heavens when the barge tied up at last. Barnevelt and Tangaloa bid good-bye to the master and his people and climbed onto the wharf to search out the office of Gorbovast, Barnevelt with the usual feeling of lepidoptera in the viscera that afflicted him whenever he was called upon to walk in on a stranger and introduce himself.

He need not have worried. Gorbovast received them—Barnevelt thought—"with garrulous ease and oily courtesies" on the strength of their letter from Castanhoso. This sleek Krishnan gentleman had long defied the dictum about the difficulty of serving two masters, for, while acting as the commissioner for King Eqrar of Gozashtand in Madjbur, he had also for years augmented his income by sending information to the *Viagens Interplanetarias* Security Force at Novorecife.

"The Snyol of Pleshch? And gvám-hunting in the Sunqar, eh?" he said, pronouncing Barnevelt's Nich-Nyami name "Esnyol"—as for that matter did all Gozashtandou-speaking Krishnans. "Well, his the riches whose is the risk, as it says in Néhavend's proverbs. You know the Banjao Sea has become a nest of most irregular bloody pirates, and there's no putting 'em down because Dur in its arrogance subsidizes 'em with tribute so they'll hurt the trade of smaller powers like Madjbur and

Zamba. Moreover rumor links these same knaves to the janrú trade which makes every independent man shudder o' nights."

Barnevelt told him a little about the unmasking of Vizqash at Novorecife.

"So," said Gorbovast, "the cul lions have been operating in these parts, eh? Well, well, and well. 'Twill do no harm to slip a word to the Chief Syndic, for the folk of Madjbur mortally fear the stuff should spread among 'em and give their women the upper hand. While we be not so susceptible as the silly Earthmen, whom the merest whiff reduces to servile jelly, still much havoc could be wrought upon us by this subtle means. As to a letter to the Douri of Qirib, you shall have it straight. 'Twere well to hasten if you would deliver it."

"Why, is the old man-eater dying?"

"No; because, so 'tis said in the mughouses, she intends, once her present consort be unheaded in accordance with their barbarous and bloody custom, the throne in favor of her daughter Zéi to resign."

Barnevelt raised his eyebrows, and his glued-on antennae rose with them. Qirib under a young and newly-enthroned queen sounded more attractive than under a tough old Tatar like Alvandi. "I hadn't heard that angle. Perhaps, Master Gorbovast, you'd give us two letters of introduction, one to each dame."

"The very thing. And watch well

your step among these masterful dames, for 'tis gossip that they keep their men subdued by this same drug—" And he told them what they needed to know about tickets and train-times, adding: "As the glass shows that the celestial wheel has not yet turned to the meridian, you'll have time to view our jewel of a city ere sallies forth the south-bound daily express."

And view it they did, wandering down to the waterfront to photograph the ships—mere dories compared with Earthly ships, but impressive enough in their own setting. There were high-sided square-riggers from Dur in the Va'andao Sea, lateeners from Sotaspé and other Sadabao ports, and even a catamaran with a crescent sail from Malayer in the far south. And long low war galleys, outstanding among them the pride of Madjbur's navy, the quinquireme *Junsar*, with her bank of five-man oars belayed to her sides, her high gilded stern, and her toothed ram projecting at the water-line forward.

They braced themselves to withstand the odors of the seafood market and sampled one of the lunches the counters of this section offered.

Barnevelt soon regretted his curiosity, for the object placed before him in a bowl of soup, a sea-creature, something like a large slug with tentacles, had the curious property of remaining alive and wriggling for some time after being cooked. He got down a couple of writhing bites

before his gorge rose and interrupted the experiment.

"You Westerners," chuckled Tangaloa, finishing his sea-slug and wiping his mouth.

Barnevelt growled and doggedly resumed his assault until his organism, too, was gone.

Then they took in the municipal zoo. Barnevelt winced at the sight of a half-grown avval in a tank, remembering his swim in the Pichidé. But then he would have loitered all afternoon watching the things in the cages until even Tangaloa, who almost never hurried, had to remind him of train time and drag him away.

In the park they came upon an open-air performance by a ballet troupe of dancers from the temple of Dashmok, the Free City's own special god of commerce. A priest was passing the hat—or rather a gourdlike container—as part of the temple's drive for some fund. Watching the leaping girls, Barnevelt felt a blush of embarrassment sweep over his face. Chautauqua County was never like this.

Tangaloa dryly remarked: "You see, Dirk, different cultures differ as to what should be covered; and few cultures other than your own Western one have that violent nudity-taboo—"

A shower ended the dance and scattered the audience. The Earthmen made their way to the terminal—to find that the train was not made up yet and would not leave for at least a Krishnan hour after its sched-

uled time. Since the station agent could give them no more definite statement than that, there was nothing to do but sit and smoke while waiting.

Presently a man in a pale blue costume, wearing a light and strictly ornamental silver helmet with a pair of silver aqebat wings sprouting from its sides, strolled in with a big bag over his shoulder and took a place on the bench next to the Earthmen.

While Barnevelt had never had much talent for picking up conversations with strangers, the uninhibited Tangaloa was soon in animated discussion with the helmeted man.

"This," said the Krishnan, pointing to his helmet, "means I toil for the Mejrou Qurardéna, bearing fardels hence to thither." (The name meant roughly Reliable Express Company.) "Our company's motto is: 'Neither storm, nor night, nor beast of prey, nor men of evil intent stay our carriers in the swift performance of their duties.'"

"A fine motto," said Barnevelt. "Matter of fact is sounds familiar."

"No doubt word of our company has reached far Nich-Nyamadze," said the courier. "And some day shall we extend our services even unto that chilly clime. Masters; I could tell you tales of the deeds of our people that would make your antennae stand upright with terror. As the time my friend Gehr carried a parcel into the heart of the dread Sunqar and delivered it to the chief

pirate himself, the fearsome Sheafasé."

Both Barnevelt and Tangaloa leaned forward, the former saying: "What sort of person is this She... this pirate king?"

"As to that, my friend Gehr knows no more than you, for Sheafasé shows himself to none but his own subjects. But since Gehr could not leave ere the consignee signed his receipt, 'twas finally arranged that the arch-robber should thrust his hand through a gap in a curtain to wield the pen. And Gehr thus caught a glimpse . . . ah, masters, what a dreadful thing was that! No human hand, but a shuddersome structure of claws and scales, like the foot of the fearful pudamef that haunts the glaciers of your own land. So Sheafasé must be a creature, not of our own honest world, but of some depraved unwholesome other planet in the deeps of space—like that called Earth, for instance, the home of all the baneful and goetic sorceries—"

"*Pun desso!*" called the gatekeeper.

The expressman got up and shouldered his parcel sack, and the Earthmen picked up their duffel bag and bird cage. So Earth was a depraved and unwholesome planet, eh? thought Barnevelt, amused and patriotically irked at the same time. Unfortunately he was in no position to start waving the checkered World Federation flag.

The train consisted of five little

four-wheeled carriages: two flatcars heaped with goods and three passenger cars that looked like converted stagecoaches, running on a track of about one-meter gauge. The locomotive was a bishtar, hitched to the leading car by a rope harness. The beast stood, swinging its two trunks, switching its tail, and swiveling its trumpetlike ears.

The rearmost car was occupied by a noisy family comprising a small male, a large female, three young, and one of the portable incubators in which Krishnans carried their unhatched eggs. To avoid the woman's chatter, Barnevelt and Tangaloa and their new acquaintance took the foremost car.

When all the waiting passengers were stowed, the mahout on the bish-tar's neck blew a little trumpet and whacked his beast with his goad. The links between the cars clanked as the slack was taken up, and the car occupied by the Earthmen started with a jerk. They clicked over switch-points and rolled past a bish-tar moving cars on an adjoining track, so close that Barnevelt, had he been so rash, could have reached out and touched one of its six columnar legs.

They rolled out of the yard, along a right-of-way between building lots, and finally out onto one of Madjbur's main streets, down whose middle ran two tracks. Presently they passed a local headed in the opposite direction and standing at an intersection to discharge passengers.

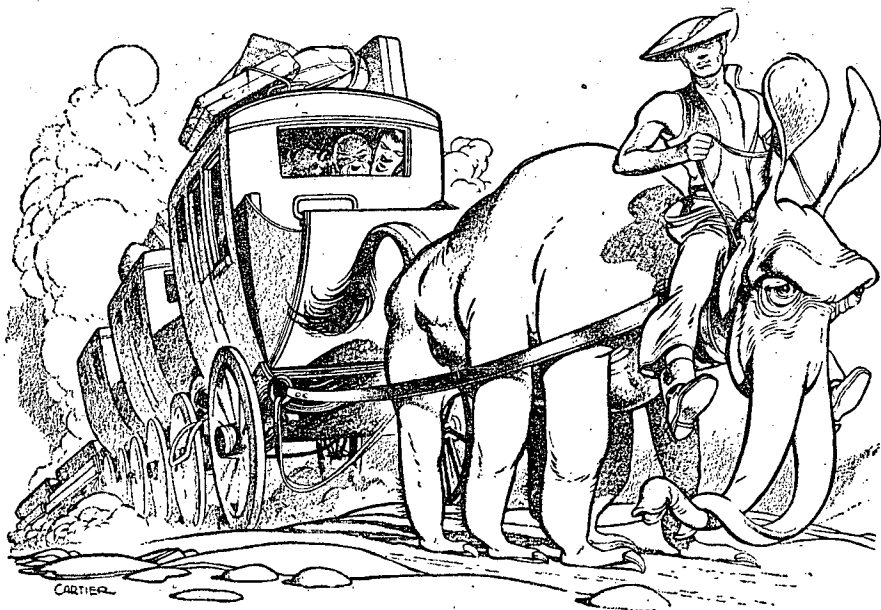
Other Krishnans swarmed the

street, some on scooters, some on short six-legged ayás or tall four-legged shomals, and some in carriages. A team of six ayás pulled a great double-decked contraption, evidently a public omnibus. At a main intersection an official-looking Krishnan in a helmet directed traffic with a sword, which he waved with such verve that Barnevelt half expected to see him slice an ear from some passing pedestrian.

Barnevelt quoted: "New things and old co-twisted, as if time were nothing."

Gradually the traffic thinned and the houses got smaller. The railroad left the middle of the street for its own right-of-way again, and a branch line curved off to the right, up-river. The city turned to suburbs, and then houses alternating with cultivated plots. The two tracks became one, and they were in open country. Once they stopped to let the frontier guards of the Republic of Mikardand, men in Moorish-looking armor, look them over and wave them through.

The ride was uneventful, save when they stopped at a nameless hamlet to water the bishtar and let the passengers eat a snack and otherwise care for their comfort, and the oldest child of the noisy family aft stealthily uncoupled the rearmost car so that when the train started up it was left standing with the fat woman screeching louder than Philo. The train halted and the male passengers pushed the abandoned car along the track until its connection with the train was re-established, the con-



ductor all the while calling upon Qondyorr, Dashmok, Báh, and other deities to destroy the young culprit in some lingering and humorous manner.

The expressman explained why he merely showed a pass instead of presenting a ticket: The Mejrou Qurardéna had an arrangement with all the main transportation media like the railroad to carry its couriers on credit and then bill the express company for mileage.

They stopped the first night at Yantr, where a train going the other way was standing on a siding to let them by; and the next night at another village. At the end of the third day they reached Qa'la, where they

again came in sight of the waves of the Sadabao Sea. The climate was noticeably warmer, and they began to see people dressed in Qiriho fashion, in wrap-around kilts and blanketlike mantles.

Next morning they were taking their places in the train when a deep voice said: "Be this seat occupied?"

A tall young Krishnan with a face like a fish, dressed much like themselves, but more expensively, climbed aboard. Without waiting for an answer he kicked the Earthman's duffel bag off the empty seat it occupied and tossed his own bag onto the rack above that seat. Then he unfastened his scabbard and leaned it in the corner, and sat down on the crosswise seat facing the Earthmen.

Another would-be passenger, looking through the cars for a choice seat, put his head into the one where Barnevelt sat.

"All filled!" barked the new arrival, though there was obviously room for one more. The passenger went away.

Barnevelt felt himself grow cold inside. He was about to say: "Pick that up!" and enforce his command, if need be, by tearing the young man limb from limb, when Tangaloa's musical voice spoke up:

"Do my senses deceive me, or are we honored with the companionship of one of rank?"

Barnevelt stole a quick look at his companion, whose round brown face showed nothing but amiable interest. Where xenological investigations were concerned, George could take as detached and impersonal an attitude towards Krishnans as if they were *microorganisms* under his microscope. Their amiabilities and insolences were alike mere interesting data, not touching his human emotions in the least. In that respect, thought Barnevelt, George was one up on him, for he tended to react emotionally to the stimuli they presented as one normally reacts to the attitudes of one's own kind.

"A mere *garm*," replied the youth briefly, but in a slightly less truculent tone. "Sir Gavao bad-Gargan. Who be you?"

"Tagde of Vyutr," said Tangaloa, "and this my trusty companion in

many a tight predicament answers to Snyol of Pleshch."

"*The Snyol of Pleshch?*" said Sir Gavao. "While I've no use for foreigners, the Nich-Nyamen are well spoken of, save that they bathe less often than is meet for folk of culture."

"It's a cold country, sir," said Tangaloa.

"That could be the way of it. As 'tis, I must spend a ten-night amongst these effeminate Qiribuma, who let their women rule 'em. Be you bound thither also?"

The expressman said "Yes."

Barnevelt wondered at the phrase "*The Snyol of Pleshch*"; he thought he'd heard it from Gorobovast, too. When Castanhoso had bestowed the *nom-de-guerre* upon him he'd assumed that it was that of some ancient gloop. If the authentic Snyol were still about, the consequences might, to put it mildly, be embarrassing.

"Have a cigar?" he said. "Where do you come from?"

"Balhíb," said Sir Gavao. He drew on the cigar, looked at it with distaste, and threw it away. He then got out a jeweled case, took out and lit one of his own, and put the case away. Barnevelt gritted his teeth, trying to take George's detached view.

Tangaloa purred: "Balhíb, eh? Do you know anything about a survey of the kingdom ordered by the king?"

"Not I."

"We heard a most fascinating tale about that land," continued the xenologist. "Something to do with the king's beard."

"Oh, that!" Gavao's face cracked in its first smile. "'Twas indeed a saucy piece of ropery, that this Sir What's-his-name from Mikardand did commit. Were't not that the Republic outweighs us five to one there would have been robustious war betwixt us. Serves old Kir right for being so free with dirty foreigners."

"How did Sir Shurgez get close enough to the king?" asked Barnevelt.

"By a crafty cautel. He came disguised as an expressman like our friend here, saying he bore a package marked for special personal delivery, to be yielded only on signature of a receipt by his altitude himself."

"'Tis nothing special," said the expressman, "but our routine procedure, to avoid suits for nondelivery of parcels."

"Be that as it may," Gavao went on, "as the king was posing his seal ring upon the document—for he, a warrior true, can neither read nor write—did the feigned courier whip from the packet a pair of shears wherewith he did effect his zany lunc. He sneaped the whisker and, ere any could stay or smite, did this bold bully-rook flee forth from the court with wightly step and gallop off upon his ayà."

"A most perverse and unjust an-

tic!" exclaimed the expressman. "My company has lodged an action at law against this same Shurgez for his impersonation. Ever has this garb been known as a badge of probity and discretion, so that messengers of the Mejrou Qurārdéna can safely penetrate whither none other can go. But now if these braggartly japers be granted leave ourselves to personate, what becomes of our immunity?"

"'Twill go whither went the scarecrow's ghost in Daghash's ballet," said Gavao. "Namely and to wif, into the nothingness of nought. But you, my masters, since you're in the mood for personalities, tell me whence and whither travel *you* and why?"

"We're planning a gvám-hunting expedition," said Barnevelt.

"Then I suppose you'll set forth from Malayer?"

"No, we were thinking of organizing in Ghulindé. We heard Malayer was under siege."

"It has fallen," said Sir Gavao.

"Really?"

"Yes. 'Tis said Kúgird took it by some foul mitching means, using a baleful new invention 'gainst the walls."

"What sort of invention?"

"I know not. To me they're all one, devices of Dupulán to ruin the fine old art of war. All inventors should be slain on sight, say I. Methinks 'twere a meritorious deed to start a secret society for the prevention of inventions in warfare. Do we not such precaution take, 'twill not

be long ere war's as unvalorous and mechanical as among the cursèd Ertsuma." (He meant Earthmen.) "Why, 'tis said that there the noble martial art became so noxiously machinal that the Ertsuma abolished it—setting up a planetary government this prohibition to enforce. Canst fancy anything more dismal?"

The expressman said: "We should destroy those Ertsuma slinking amongst us in disguise, ere we're hopelessly corrupted by their evil magic."

"An interesting idea," said Barnevelt. "However, I think we'll still set out from Ghulindé, for Malayer would be pretty disorganized yet after having been besieged and sacked."

Gavao laughed. "Good hunting to you, but ask me not to patronize your product, for never yet have I found the gvám-stone necessary to the enjoyment of life's elementary pleasures. Why, ere I quitted Qa'la—"

And Gavao was off on the one subject on which he was truly eloquent. For hours he regaled his companions with tales of exploits which, if true, made him the planet's leading boudoir athlete. He was a mine of information on the more intimate customs and characteristics of the females of the various races and nations of Krishna. Barnevelt realized that he was in the presence of a great specialist. However, he became bored after a while, and there was nothing he could do short

of assault to staunch the flow of amorous anecdote.

—All went smoothly enough as they stopped the night at another village and rolled on next day along the coast towards Djazmurian.

As they neared their destination they came to another border, from Mikardand into Qirib. As the train halted, Barnevelt became aware that the guards on the Qiribo side were women in musical-comedy outfits of pleated kilts and brass helmets and brassières. Some of them sported shields and spears as well.

"Stand by your cars," said a beamy specimen—evidently the commanding officer—in Qiribo dialect. "Ah, you there!" She pounced on Barnevelt and his companions. "Hither, Na'i! Seal these fellows' swords into their sheaths, for we let no males go armed in this our land. As for you with the mace"—she picked her teeth with a twig as she pondered—"since it has no sheath, we'd best fasten it to your belt. Then if you'd use that ugly thing it must needs be at the cost of your breeches, which would enhance neither your prowess nor your dignity."

The girl called Na'i came over with a kit and belayed the swords of Barnevelt and Gavao into their sheaths with several turns of stout iron wire wound around the guard and through one of the scabbard rings. The ends of the wire were then clamped together in a little gadget that left them buried in a lead

seal like that used on Earthly freight cars.

The customs guard added severely: "Should these seals be broken, you must answer to our magistrates forthwith. And your excuse had better be good, or else—" She drew a finger across her throat. "Now get in line to pay your tariffs."

Then they were off for Djazmurian again. They were no sooner out of sight of the frontier station than Sir Gavao brought out an apparatus of his own. First he pulled on the wire until he had some slack in one length of it. Then he snipped it with a small pair of pliers and twisted the ends together. Then out of a tiny container he dug a fragment of dark waxy substance which he rubbed over the splice until only the most careful examination would show that the wire had been tampered with.

"Now," he said with a sly piscine grin, "does trouble impend, I have but to give my hilt a good tug, and the wire parts and out comes my lady fair. 'Tis the wont of gentry forced to travel through this noisome province of—" He used a baldly anatomical term to describe the matriarchate.

"How about doing the same to ours?" said Barnevelt, for Gavao was putting away his kit.

"Oh, very well." And soon the Earthmen, too, had their weapons freed in this manner.

"Thanks," said Tangaloa. "What sort of place is Djazmurian?"

"A reeky hovel where honest men durst not wend abroad o' nights save in pairs or more. While 'tis under the rule of Qirib like the other land hereabouts, 'tis an international garbage heap, swarming with the vermin of the five seas, and Queen Alvandi's she-officers can no more cope with it than you can catch an avval with a fishhook."

Before reaching Djazmurian, late in the day, the railroad detoured inland until it came to the Zigros River, then turned east again and followed the river as it wound towards the town. The sun, setting behind the creaking cars, was reflected redly in the rough native glass of many windows. The second largest port of the Sadabao Sea did not prove quite so bad as Gavao's words, though indeed it showed a less prepossessing face than Madjbur, being a sprawled-out city of slums, grog shops, and dilapidated-looking characters of varied hue and garb.

"Where are you staying?" Barnevelt asked Gavao.

"Angur's Inn, across the street from the station. 'Tis the only hostelry where the stench assailing the antennae is not such as to turn a gentleman's second stomach."

Barnevelt exchanged a glance with Tangaloa. Gorbovast in Madjbur had recommended this same place to them, for here they would have to stop overnight before taking the stage for Ghulindé in the morning.

V.

The train ground to a stop with squealing brakes. As the Earthmen gathered their baggage and got out of their little car, somebody on the splintery boardwalk beside the train said:

"Pictures, my lords? Magic pictures?"

It was a shabby oldster with a straggle of hairs on his chin and a large box on a tripod.

"By the green eyes of Hoi," said Barnevelt, practicing a Krishnan oath, "look at that!"

"What the devil is it?" asked Tangaloo.

"A camera." Barnevelt had recognized an apparatus like those used centuries before on Earth in the pioneering days of photography. He could not help stealing a glance at the little Hayashi secure in its setting on his finger. "Wonder how he can get a picture in this light?"

He gazed up-river where the line of the plain already drew a chord across Roqir's red disk; and continued: "This must be a product of Prince Ferrian's scientific revolution. No thanks," he told the photographer and started to move off, when a shrill explosion of speech made him pause.

A beefy policewoman in scarlet and brass was bawling out the photographer for violating some ordinance by soliciting business on the railway platform. She ended:

". . . now go, you wretch, and

thank the Mother Goddess you do not pass the night in our dankest dungeon!"

Barnevelt started to go too, but was halted by another outcry: "Stand fast, you! I do perceive you are a stranger and therefore ignorant; but no excuse does ignorance of the law provide. Know that we of Qirib do take it amiss to hear the false goddess Hoi sworn by. 'Tis classed as conduct disorderly, wherefore penalties most condign are established. Let's see those weapons!"

She examined the seals on Barnevelt's sword and Tangaloo's mace. Barnevelt's heart rose into his mouth; he was sure she would notice the place where Gavao had cut and spliced the wire. But whether from perfunctory haste or from the weak waning sunset light she failed to do so, and sent them on their way with a final: "Go about your legitimate concerns, aliens, but watch your step!"

Angur's Inn stood in plain sight of the station, with the skull of some long-fanged carnivore over the doorway to identify its line of business. It was a three-story building built out over the sidewalk, a row of arches holding up the overhanging second story. All the ground floor of the building, save an entrance and a small office space at one side, was taken up by an eatery.

The travelers pushed through a crowd watching a sidewalk magician produce a baby unha from his hat, and entered the door at the

side. A tap on the little gong that hung in the upper part of the cashier's window brought a flat Krishnan face into the opening; a face to which a pair of unusually long antennae gave rather the look of a beetle.

"Angur bad-Ehhén, at your service," said the face.

"*Baghan!*" yelled Philo from his cage.

"Well . . . really, my masters—"

"It was not we," said Barnevelt hastily, and, embarrassed, plunged into a typically fustian Krishnan speech: "It is this wretched beast from distant lands, whose brutish humor 'tis to cry out words in human tongues the meanings whereof he is as ignorant as you or I of the inmost secrets of the very gods. Therefore take no offense; may your lucky star ever be in the ascendant. Know that I am Snyol of Pleshch, a traveler, and this my companion Tagde of Vyutr."

He paused, slightly out of breath but proud of his performance.

While they were settling the matter of the room, Angur kept craning his neck through the opening to look at the macaw. "Truly, sirs, never have I seen a creature clad in fur of such strange abnormous form. Whence comes it?"

"From the loftiest mountains of Nich-Nyamadze," replied Barnevelt, realizing that feathers were unknown on this planet, and hoping his adopted fatherland had moun-

tains for Philo to come from. The lack of feathers was all to the good; there would be no feather pillows to give him hay fever.

"*Garrrrrk!*" said Philo, half opening his wings.

"It flies!" cried Angur. "And yet it be no aqebat nör bidjar nor other flying beast of form familiar. 'Twould make a rare attraction for my hospice, could you to part with it persuaded be."

He thrust out a tentative finger, then snatched it back as Philo lunged at it with gaping beak.

"No," said Barnevelt. "Regret it though we shall in aught to contravene you, yet when we . . . uh . . . bought the creature, did a great astrologer assure us that our fates were linked to his, and woe betide the day we parted from him."

"'Tis pity," said Angur, "but 'tis plain as the peaks of Darya that you do have good reason for your answer, as the witch of the forest said to Qarar in the story. Here's your key. Share your chamber with another of my guests, by name Sishen, you must or sleep elsewhere. But let it vex you not, for he is of another world and uses not the bed."

Tangaloa remarked as he followed Barnevelt: "I wonder who is this joker he's putting in with us?"

"He said not of this world, which sounds like a ghost."

"Then you and he could hold a convention. Are you sure it is a he? The personal pronouns don't always distinguish gender."

"No, but we shall see. How do these oil lamps work?"

When they had adjusted the lamp they looked for clues to the nature of their fellow-roomer. In one corner lay a small bag with oddments of personal possessions sticking out. On one windowsill reposed three small jars, stoppered, and another open with handles protruding. Barnevelt found that the handles were those of small paint brushes.

He exchanged glances with Tangaloa and shrugged. They stowed their gear, washed up, and checked their disguises. While looking at himself in the mirror Barnevelt saw over his shoulder something white against the door. It was a posted notice. By working on the Gozash-tandou curlicues at the same time, he and Tangaloa managed to translate it:

NOTICE

Rites of Love shall be observed only in accordance with the Regulations of the Governing Council of the Cult of the Goddess Varzai, namely and to wit: They shall be preceded by the Short Prayer to the Mother Goddess and followed by the Lesser Ritual Mundification. A Love-Offering of one kard-Qiribu—for the Mother Goddess shall be left with the Innkeeper. By Order of Sehri bab-Girádji, High Priestgess.

"Well!" said Tangaloa. "That is the first time I ever saw anybody put a tax on *that*."

Barnevelt grinned. "Just as well we turned down Angur."

"A bigoted lot of henotheists, these Qiribuma. I wonder how the

tax collectors can check up?"

"Probably a custom more honored in the breach than the observance," said Barnevelt.

From the tavern came the sounds of weird music. An orchestra of four Krishnans—two men with tootlepipes, another with a drum, and a girl with a harplike instrument—were giving it out while in the dimly-lit middle of the room a young female Krishnan was performing a dance in the course of which she was winding herself up in an endless length of gauze, like a caterpillar spinning its cocoon.

"She seems to be doing a strip-act in reverse," said Tangaloa. "We should have got here sooner."

Barnevelt replied: "Matter of fact. I half expected to see a male Qiribu stripping to an audience of these Amazonian females."

The room smelt of Krishnans and of nameless drugs and liquors, and had benches extending around most of the wall. Some diners were already at work with their little eating spears. A mixed lot, thought Barnevelt, but predominantly bourgeois, with a masked couple in the corner in aristocratic silky stuff.

In accordance with custom the Earthmen gave their orders over the counter to the cook, who sweated at his task in sight of all, and then sidled around the edge of the room and slid into a vacant place. The waiter brought them their kvad, and they sat and sipped while the girl

with the gauze continued her gyrations.

The girl finished. As the audience cracked their thumb joints by way of applause, several more customers came in, and on their heels one who hardly fitted: a dinosaurian creature, a head taller than a man, walking on birdlike legs with a tail as long as the rest of it stuck out behind to balance. Instead of clothes, the newcomer bore upon its body an intricate design of interwoven stripes painted on its scales.

"An Osirian!" said Barnevelt. "And a male from his wattle. Jeepers, I didn't expect to see one of those here."

Tangaloa shrugged. "There are quite a few on Earth. Not a bad lot, though tending towards hypomania—impulsive and excitable."

"I've seen them, but I don't know any. I once took a girl who was deathly scared of snakes to see Ingrid Demitrious in 'Lust Incorporated,' and when the lights went on an Osirian was sitting next to her and she fainted."

"They are mostly harmless," said Tangaloa, "but if you ever get in an argument with one don't let him look you in the eye, or he will have you under pseudohypnosis before you can say 'thalamus'. Unless you are wearing a silver skullcap next to your scalp."

"Say, George, d'you suppose that's our roommate?" Barnevelt caught the waiter's eye and beckoned.

The servitor approached and mur-

mured: "Seeing that you're Nich-Nyamen, my lords, perchance you'd like a brazier of nyomnigë; we have a secluded alcove for the purpose—"

"No thanks," said Barnevelt, not sure what nameless vice the waiter was trying to tempt him into. "Who's the fellow with the tail?"

"That's sishen, who dwells here," said the waiter. "A generous tipper, for all his horrid form exterior."

"Well, let's hope the species is honest. When will our chow be ready?"

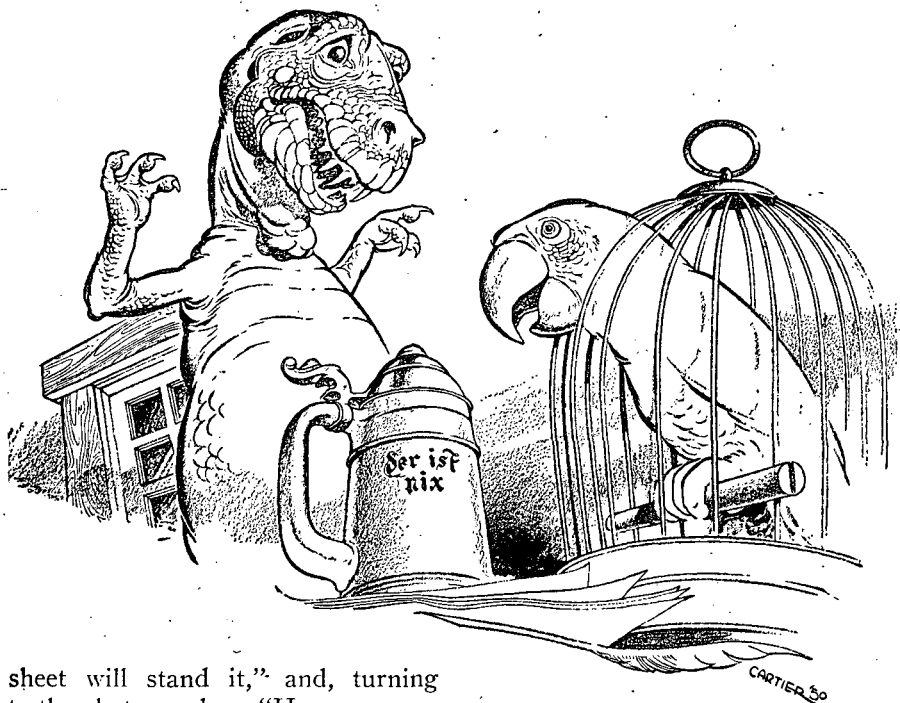
The Osirian made it plain that the gulf that divided intelligent beings with tails from those without was one not easily crossed. After filing his order in a shrill whistling accent that the cook could hardly understand, he squatted in a corner facing the wall, his tail lying along the floor out into the room, and he looked up nervously every time somebody walked near. The waiter brought him his drink in a special vessel like a large oil can.

Barnevelt, glancing in the other direction, said: "Oh-oh, if there are ghosts around, this would seem to be it. At least he's haunting us."

It was the whiskered gncient with the box camera. He had been speaking to the man in the mask, and now came over to the Earthmen, quavering:

"Pictures, my lords? Magic pictures?"

"Let's give the old sundowner a break," said Tangaloa, "the swindle



sheet will stand it," and, turning to the photographer: "How soon can you deliver prints?"

"Tomorrow morn, good my lord. I'll toil and swink all night—"

Barnevelt felt like objecting, for several reasons, but held his peace, not wishing always to be cast in the rôle of penurious fussbudget by his colleague's easygoing ways. Besides, it was a chance to see what Earthly pioneers in photography like Daguerre and Steichen had had to go through.

The photographer spent some minutes focusing, moving first one leg of the tripod and then another. Then he got out a little tray with a handle protruding from the center of its lower surface, and a ball of string.

He cut off a length of the string and caught one end of the piece under a little cleat on the upper surface of the tray.

Then he brought out a phial from which he sprinkled on the tray a yellow powder like that which Vizqash had extracted from the pods at the start of the abortive picnic. He stoppered and put away the phial—still holding the tray by its handle so that its powered surface remained level—and brought out a flint-and-steel lighter which he snapped against the dangling end of the string until the latter caught and sizzled. It was a fuse.

"Hold you still, noble sirs," he said, reaching around to the front of the camera and flipping a switch.

The old man stepped back, holding the tray over his head. The fuse burned with little spitting sounds, the flame running up the string and over the edge of the tray out of sight.

Foomp!

A bright flash lit up the room, and a mushroom of thick yellow smoke boiled up from the tray. As the photographer reached around the camera and again flipped the shutter switch, a clatter drew eyes down the room to where Sishen the Osirian had leaped to his feet in startlement and upset his drinking vessel.

The Osirian took two long steps towards the photographer who, peering up, seemed to see the creature for the first time.

"*Iyá!*" howled the old man. Snatching up tray and camera he rushed from the tavern.

"Now wherefore did he thus?" asked Sishen. "I did but mean to ask him if he would take one of me as well, and off he goes as though Dupulán were hard upon his trail. These Krishnans are difficult folk to fathom. How, sirs, be you my new roommates? For by your shaven polls I do perceive you are Nich-Nyamen, and Angur has but now advised me that I'd share my quarters with such this night."

"It seems so," said Barnevelt.

"Yes? Then let us hope you come

not in twixt midnight and morn, in riotous mood to rouse me from my rest. We'll meet again, fair sirs."

As the Osirian returned to his place, Barnevelt said: "It occurs to me old Whiskers might be another janirú man."

"You're too suspicious," said Tangaloa. "It's as Castanhoso told us: Everything out of the ordinary gets blamed—Look, here comes our fish-faced friend with the bad manners."

The tall Sir Gavao bad-Gargan was pushing his way in. He spotted the Earthmen and approached with a cry of: "What-ho, the Nich-Nyamen! As a reward for the due deference you've shown my rank, I permit you to eat with me." And he flung himself down. "Waiter!" he boomed. "A cup of buhrén, and sprackly! Where's our Mejrou man? The parcel carrier?"

"Haven't seen him," said Barnevelt, and to the waiter: "The same for us."

"Ah well, small loss. An ignorant wight, crediting the myths of magic powers of the accursed Earthmen. I, now, am emancipate from superstitious follies, in which I do include all talk of gods, ghosts, witches, and powers thaumaturgic. All's governed by unbending laws of nature, even the Ertsuma."

He stuck a finger in his drink, flicked a drop to the floor, muttered a minor incantation, and drank.

Barnevelt said in English: "Watch this guy; he's up to no good."

"What say you?" barked Gavao.

Barnevelt answered: "I spoke my native language, warning Tagde against such incautious overindulgence as cost us dear in Hershid."

"'Tis the first I ever heard of hardened mercenaries counting costs with such unwarlike clerkly caution, but 'tis your affair. At whom do you stare so fixedly, fat one?"

Tangaloa looked around with a grin. "The little dancer over there. Either my old eyes deceive me, or she's giving me the high-sign."

Barnevelt looked in the direction indicated. Sure enough, there sat the dancer, still wrapped in her meters of gauze.

"This bears looking into," said Tangaloa. "You order dessert for me, Snyol."

"Hey—" said Barnevelt weakly. While he did not like to see Tangaloa headed for some escapade, he knew George would be hard to stop. Therefore he sat still and unhappily watched Tangaloa's broad back recede into the shadows in pursuit of the dancer, in temper amorous as the first of May.

"Ao, here comes the singer!" said Gavao, pointing. "'Tis Paribab-Horádj, well-known along the Sadabão Coast for her imitations. I mind me of the time I was in an Inn in Hershid with a singer, a dancer, and a female acrobat, and in order to decide—" and Gavao was off on another of his Paphian anecdotes.

A young female Krishnan with the bluish hair of the western races had dragged in a stool of intricate workmanship and now seated herself upon it. Her costume consisted of a square of thin purple stuff, a little over a meter on a side, wrapped under one armpit and fastened with a jeweled clasp over the opposite shoulder. She carried an instrument something like an Earthly child's toy xylophone and a little hammer to strike it with.

She seated herself on the stool with the instrument in her lap, and cracked a couple of jokes which caused many to make the gobbling sounds that passed here for laughter, though between the dialect and the speed of her speech Barnevelt could not understand them. (He lived in dread of running into a real Nich-Nyamē who would insist on conversing with him in the difficult Nich-Nyami language.)

Barnevelt caught a flash of motion out of the corner of his eye. As he looked around, his companion's arm resumed its former position. But Barnevelt could have sworn Gavao had made a quick pass over his, Barnevelt's mug. A knockout drop?

Barnevelt had a supply of capsules and pills of various kinds in a pouch next to his skin, but he could not get through the tight Krishnan jacket without attracting attention.

The girl now beat upon her instrument, which gave forth clear bell-like tones, and sang in a voice dripping with melancholy and nostalgia:

"*Les tálða kvénten bif orgát*
'Anévorb rottum aind—"

Though to Barnevelt the tune sounded vaguely familiar, he could make no sense of the words. *Kvénten* would be the present passive infinitive of *kvénter*, "to drink"—

Then he snorted as it hit him. By Zeus, he thought, I come eleven light-years to hear a dame sing "*Auld Lang Syne*" in a dive! Wasn't there any place in the universe where you could get away from Earthly influence? The next planet he visited would be one where the folk had tentacles and lived in a sea of sulphuric acid.

There still remained, however, the problem of his possibly doped drink. If he simply sat without drinking he'd arouse suspicion—

Then it occurred to him that two could play at that game. He caught Gavao's arm and pointed: "Who's the fellow with the mask? The Lone Space-Ranger?"

As Gavao looked, Barnevelt switched mugs with him.

"Those?" said Gavao. "I know not; 'tis the custom of the local gentry to mask themselves when mingling with the general. As I was saying, when we awoke—"

Barnevelt took a gulp of Gavao's liquor, which tasted something like a whiskey sour made with tomato juice. Gavao drank likewise. The singer started off again:

"Índa blú ridj maonten
zovor djinyá
'Ondat rélo va lounsom pain—"

Whoever wrote that old clinker about the 'Lonesome Pine' would never know it, thought Barnevelt, watching Gavao for signs of the effect of his drink. The singer worked her way through "*Die Lorelei*," "*La Cucaracha*," and "Drink to me Only," and was starting on:

"Djingabelz, djingabelz, djingel
ollavé—"

when the Krishnan wiped his mouth with his sleeve and muttered:

"That potation must have turned my second stomach; I feel unwell. When I recover I'll seek out the unha responsible and skewer him in despite, for such unmannerly dealing with a collared knight—"

By the time Tangaloo appeared with the expression of a canariophagous cat, Gavao's insensible head was pillowed on his hands on the table. Tangaloo said:

"What's wrong with the skite, stonkered already? I'm thirsty—"

Barnevelt shot out a hand and covered Tangaloo's mug, saying quietly: "Don't; it's doped. We had a visit from one Michael Finn, and I switched 'em. Let's go."

"Are you mad? We are in the midst of the most fascinating investigation of an alien culture, and you want to go! Here comes the band again; let's see what they have to offer."

"Excuse me while I shudder."

"Don't you dance? If I had my third wife here I would show you—"

The four Krishnans with the instruments filed in and began emit-

ASTOUNDING SCIENCE-FICTION

ting an eerie exotic tune which, after a while, Dirk Barnevelt recognized as that scourge of the radio waves, "I Don't Need No Blanket" which had been popular on Earth three years before he left it.

He turned a grimace to Tangaloo. "Every time I begin to imagine I'm in the Mermaid Tavern in Shakespeare's time they spring something like that!"

"A hopelessly parochial point of view," said Tangaloo. "You should take things as they come, as I do."

"You certainly do!" said Barnevelt in a marked manner.

The masked couple got up and danced a slow Krishnan dance that consisted mainly of bowing to each other. Barnevelt got his first good look at them: The man lithe and well-muscled despite his small size and androgynous garment, a tunic of pale pink gauze that left one shoulder bare. The woman similarly clad but with one difference—she wore a shortish broadsword slung at her side.

Barnevelt said: "You can't say the women wear the pants in Qirib, but they do wear the swords. There's something familiar about that bleep; wish I could place him."

Other couples got up to dance, too. Then the Osirian stood up, belched, and teetered on his birdlike feet over to the harpist.

"Come," he burred, "since you play an Earthly tune, let me show you Earthly dancing—"

Presently the reptile and the entertainer appeared upon the floor, the latter bearing the expression of one who is only doing this to avert worse trouble. The Osirian started to spin round and round in the steps of the popular Earthly zhepak, and his tail whacked the masked man in the fundament just as the latter was bowing again to his lady.

"*Hishkako baghan!*" roared the masked man, recovering his balance.

"I apologize—" began the Osirian, but the masked man snatched his partner's sword from its sheath, grating:

"I'll apologize you, you scaly horror! 'Twill pleasure me to see your hideous head, shorn from its vile trunk, leaping like a football adown the planking of the floor!"

He stepped forward, swinging the heavy blade around for a slash.

Barnevelt picked up his empty mug. It was a solid piece of ceramics. He drew back his arm and let fly.

The mug shattered against the back of the masked man's head, and the latter's leading leg buckled under him, so that he fell forward to hands and knees. The Osirian darted out the door.

The room was full of babel. Angur hauled the masked man to his feet and tried to pacify him, while Barnevelt, having resumed his seat, looked innocent but kept his sword hilt within reach. The masked man glared around the room, saying:

"Fainting-fit my eggless aunt! Some villain did most discourteous-

ly jerk me upon the pate from behind, and when I catch the varlet I'll clapper-claw him fittingly. Saw you the miscreant, madam?" he asked his companion.

"Nay, for my eyes were upon you, my lord."

The eyes behind the mask came to rest on Barnevelt. "What—" the masked man began, and looked around for the sword he had just been using.

Angur and the waiter, one on each side of him, uncovered short bludgeons. The former said: "Nay, brawl not on my premises, my lord, or I'll have the watch in despite your status. Do you be good, now."

"*Chá!* Let's forth, madam, to seek entertainment meeter for our rank. After all, I am who I am!"

"That was our friend Vizqash bad-Murani!" said Barnevelt. "Remember the last time he used that expression?"

Since Tangaloea at last agreed to depart, they paid and went to their room, leaving the somnolent Gavao still sprawled upon the table. As they opened the door, Sishen the Osirian was bending over the macaw's cage, and as they stepped into the room he twitched aside the cloth that covered it. Philo opened his eyes, flapped his wings, and uttered an earsplitting "*Yirrrrk!*"

The Osirian jumped back, turned, and leaped upon Tangaloea, seizing him around the waist with his long hindlegs and around the neck with

his arms. From his reptilian throat came a whistling approximation of the Gozashtandou for "Save me!"

"Get down!" cried Tangaloea, struggling under his burden, in a voice muffled by the creature's terrified embrace.

Sishen got, drooling the Osirian equivalent of tears.

"Sorry am I," he hissed, "but the events of this eve—the flash of light, the brabble with the masked gentleman, and now the uncanny outcry of this kindless monster—have unstrung me quite. Were not you those who succored me when that fellow sought to slay me for a trivial gaffe?"

"Yes," said Barnevelt. "Why didn't you fix him with your glittering eye?"

Sishen spread his claws, helplessly. "For the following reasons: Item, ere we Sha'akhfi be allowed on Earth or the Earthly space line, must we pledge ourselves the use of this small talent to forswear. And since our own space line runs not hitherward nigher than Epsilon Eridani, to visit the Cetic planets must we of the Procyonic group to this pledge subject ourselves. Item: I'm far from the most effective of my species in the employ of this mental suasion, though given time I can cast the mental net or lift it as well as others. And item: Krishnans are less liable to our guidance benign than men of Earth, wherefore I'd not have had time this bellowing bully to subdue before my own life were sped. Hence came your intervention in time's

nick. Now, would you aught in recompense of Sishen, speak, and to the lengths of my poor ability shall it be given."

"Thanks; I'll bear that in mind. But what brings you to Djazmurian? Not a lady Osirian, surely."

"I? I am a simple tourist visiting places far and strange for the satisfaction of my longing after new experience. Here am I stuck, for three days ago was my guide, poor lad, fished from the harbor with a knife wound in his back, and the travel agency yet essays to find me another. So meager my command of these tongues is that I dare not journey unaccompanied. This loss made good, I will onward press to Madjbur, where 'tis said there stands a temple of rare workmanship." The Osirian yawned, a gruesome sight. "Forgive me, gentles, but I am fordone. Let us forthwith to our rest."

And Sishen unrolled the rug he used in lieu of a bed and flattened himself down upon it, like a lizard basking in the sun.

Next morning Barnevelt found it necessary to rouse Tangaloa—the world's soundest sleeper—by bellowing in his ear:

"Wake! For the Sun, who scatter'd into flight

The Stars before him from the Field of Night—"

They left while Sishen was still touching up his body-paint, a task that apparently consumed much of his waking time. When they came downstairs they found Angur argu-

ing with three rough-looking youths with cudgels.

"My masters!" cried Angur. "Explain to these joltheads that the pictures the old photographer left this morn are yours, not mine; and deal with the matter howso you will."

"What's this?" said Barnevelt.

The biggest of the three said: "Know, men of Nich-Nyamadze, that we're a committee from the Artists' Guild, which has resolved to root out this fiendish new invention that otherwise will rape us of our livelihood. For how can we compete with one who, possessing neither skill nor talent, does but point a silly box and *click*! his picture's done? Never did the gods intend that men should limn likenesses by such base means mechanical."

Barnevelt muttered: "They actually worry about technological unemployment here!"

The Krishnan went on: "Do you but yield the pictures the old coystiril made, and all shall be well. Should you wish portraits of yourselves, our Guild will rejoice to draft or daub 'em for a nominal fee. But these delusive shadows—*chá!* Will you give them up like wights of sense? Or must we to robustious measures come?"

Barnevelt and Tangaloa exchanged a long look. The latter said in English: "It does not really matter to us—"

"Oh, no!" said Barnevelt. "We can't let 'em think they can push us around. Ready?"

Tangaloa sighed. "You have been

eating meat again. And you were such a peaceful chap on Earth, too! *Coo-ee!*"

Barnevelt hauled on his hilt. The wire parted and the sword swept out. With a mighty blow he brought the blade down flatwise on the head of the spokesman for the Artists' Guild. The Krishnan fell back on the cobbles, dropping his club. Tangaloo at the same time tugged out his mace and advanced upon the other two, who ran like rabbits. The fallen man scrambled up and fled after them. The Earthmen chased them a few steps, then returned to the inn.

"One thing after another," said Barnevelt, after looking around to make sure no Qiribo policewoman had observed the fracas. "Let's see those pictures. If I'd known they were as bad as that, I'd have given them to those guys. I look like a mildewed mummy!"

"Is that bloated gargoyle I?" said Tangaloo plaintively.

Reluctantly they gave Angur the money for the photographer, wired up their weapons again, gathered their gear, and set out across the main boulevard of Djazmurian for the railroad station.

TO BE CONTINUED

IN TIMES TO COME

Next month the lead novelette is by James Schmitz, a story having to do with *Cushgar*—an interstellar empire of piracy—and one Zone Agent of the Vegan confederacy. Schmitz has a remarkable faculty for mixing obvious fantasy—which never belongs in science-fiction—with pure science-fiction, and somehow making the oil-and-water blend come out very smoothly. You'll remember the *Witches of Karres*. This time we have ghosts attacking interstellar raider-cruisers. Obvious nonsense. Obvious non-science-fiction. Obvious—oh, well, you'll find out. It's good entertainment—and good sense!—although it obviously can't be.

"Tools of the Trade," by Raymond F. Jones, continues the story of "Joe's Service and Repair" for spaceships. I don't know whether you've ever seen Johansen Gauge Blocks—they're about as simple a gadget as anyone could imagine. Just a metal block, a simple piece of steel, one inch long, or one-half inch long, or whatever size you choose, with the size stamped on it. A gadget so simple any Roman could have understood and used it. It's a measuring stick. The machine—for a measuring device is a machine in its simplest form—is simple, readily comprehensible. But the techniques, the tools, behind the making of that ultimately simple gadget—!

A service shop can really get into trouble that way. The machine's all right—but how do you make it?

And, of course, there's Part Two of "Hand of Zei," wherein is demonstrated the importance of having feather-allergy and parrots simultaneously.

THE EDITOR.

TRIGGER TIDE

BY NORMAN MENASCO

It was a strange planet—but there was nothing lacking in the thoroughness of the beating-up the political gang gave him. But their really deadly weapon was the tide—

Illustrated by Orban

That first day and night I lay perfectly still. I was often conscious but there was no thought of moving. I breathed shallowly.

In midmorning of the second day I began to feel the ants and flies that swarmed in the cake of mud, blood and festering flesh I was wearing for clothes. Then, through the morning mists of its tiny sixth planet, that giant white sun slammed down on me.

I had been able to see something of the surroundings before they began working me over. After they had taken the hood off my head and while they were stripping away my clothes and harness of power equipment, the first orbit moon—the little, fast, pale green one—shot up out of the blue-black sea. I had been able

to tell in its light that we were on a tide shelf, probably the third.

Now burnt, lashed and clubbed I lay face down in the quick growing weeds of the hot tide shelf. The weeds were beginning to crawl against my face in the breathless air and dimly I realized a moon must be rising.

It had been the predawn of the tenth day of period thirty-six when the two of them stepped out of an aircar parked on Quartz Street and the girl I was walking home to the Great Island Hotel turned me over to them. If it was true that I had been lying here that day and night and this was the next midmorning, and if this was the third shelf, there would soon be a tide washing over me.

That tide was not easy to calculate. That it could be figured out is a tribute to the way they drill information into you before you leave The Central on an assignment. But the most thorough textbook knowledge of a planet's conditions is thin stuff when you are actually there and have to *know* them better than the natives. I tried the calculation all over again with that great sun frying my skull and got the same answer.

In about an hour the big fifth orbit moon and the sun would be overhead. The equally big third orbit moon would be slightly behind. Together they would lift the sea onto the third shelf all through this latitude.

The kind of day it was these tides would come up smoothly and steadily. Through the buzzing of flies I could not hear the sea. That did not mean it was not a hundred feet away lapping rapidly higher on the third sea wall.

I lay perfectly still except for my shallow breathing and waited for the sea.

When the water came over me in a shallow rush I strangled. Quickly, I refused to move. The water washed over me again and again softening the clotted mud that had kept me from oozing to death. Finally when the surf receded it was still about me and I had to try moving.

I got to my knees and set to work with my right hand to get some vision. With the sea now washing

higher about me I finally got the clot from my right eye and achieved a blurred view of daylight.

You have to have at least some luck. When you run out of it altogether you are dead. The fourth sea wall was about fifty yards away and looked as though a normal man could make it quite easily. How I made it was another story. I could barely use my legs and the left arm was useless. All the time I was reopening my wounds on the quartzcar formations of the sea wall.

That quartzcar is not like the familiar coral that forms some of the islands of Earth. It is made up from quartz particles that are suspended in the ocean water. It is a concretion in an intricate lattice which small crustacea pile up in regular patterns. The animals build their quartzcar islands from the quartz dust that rises in tidal rhythms off the floor of the shallow planetary sea. Consequently the islands come in layers with tide shelves that correspond to the height of various lunar tides.

The only land on that planet is the countless archipelagoes of quartzcar. On the sea walls or when you dig it up it presents a fine rasplike face that opened my wounds and left me bleeding and gasping with pain when I reached the top.

That afternoon I was not unconscious. I slept. It was dark when I awakened. Then slowly, magnificently it was light again as the fifth orbit moon rose over the sea, a great



ball of electric blue. Only a short time later the little chartreuse first moon came rocketing up to catch and finally, a shade to the south, to pass the larger body on its own quick trip to the zenith.

Back at The Central the "white haired boys," the psychostatisticians, can tell you all about why people get into wars. If they had not been right about every assignment they had plotted for me, I would never have lived to get beat up on this one. Sometimes their anthropoquations give very complex answers. Sometimes, as in the case of these people, the answer is simple. It was so simple in this case that it read like Twentieth Century newspaper propaganda. But lying there looking out into the glorious sky I didn't believe in wars. There never had been any.

There never would be any. Surely they would close The Central and I could stay there forever watching the great moons roll across the galaxy.

I reawakened with a sharpened sense of urgency. I got to my feet. There was *going* to be a war if I didn't get on with the assignment. The fine part about this job was everyone wanted it "hush." The ideal performance for a Central Operator is, of course, to hit a planet, get the business over with and get out without anyone ever guessing you were doing anything but buying curios. Generally those you're up against try to throw you into public light—a bad light. These boys wanted it hush much worse than I did. It gave me a certain advantage tactically. I will not say the mess I had got myself

into was part of my plan. But they were going to scramble at the sight of their mayhem walking back, into the city.

I had to skirt half the city to reach my contact and a safe place to heal. To make it before morning I had to take advantage of every moment of moonlight.

After about half my journey I had a long wait in the dark before the fourth orbit moon came up and I was able to move ahead. I was skirting the city very close through the fern tree forest but, except for an occasional house and couples necking in aircars idling low over the fronds, I had little to worry about.

Toward morning the only light was the second brief flight of the tiny first moon and the going was much slower. But at least while it was up alone the vegetation did not move about so much. I finished the last lap to my Contact staggering and dangerously in broad daylight.

He didn't say anything when he opened the door of his cottage. He didn't show surprise or hesitate too long either. He led me in carefully and put me down on a bed.

Part of the time he was working on me I slept and part of the time I was wide awake gasping. It would have been just about as bad as when they worked me over except that he used some drugs and I knew he was trying to put me together instead of take me apart.

Then at last I slept undisturbed—that day and the next night. When I

awoke he was still there staring down at me with no expression on his face.

It was the first time I had tried to form words with my mashed mouth. I finally got out, "How did you recognize me? You'd only seen me normal once."

I got two shocks in rapid succession. He said, "I'm awfully sorry about your eye."

It flashed over me that this man had gone sour as an Operator. No Central Operator is ever sorry for anything. Certainly no one ever says so when you've had "bad luck."

I got the second shock and pulled myself up from the bed. I searched the blurred room till I made out a mirror and went to it without his help. It was only then I realized they had put out one of my eyes.

I don't know whether it was just fury and determination to heal fast or whether he was right that there is some mysterious influence on that planet that accelerates healing. It took me only about three weeks to get back to the point where I felt I was in shape to tackle them again. The bones in my arm knitted very well and it was surprising how fast the burns healed.

He knew a lot about that planet, this Operator. He couldn't stop asking questions about it. What made the vegetation move when a moon was up? Why did the animal life, including men, slow its activity at the same time? The only question it seemed he hadn't asked was why he, an Operator for The Central, had

adopted one of the major habits of the planet he had been assigned to. He wouldn't move while there was a conjunction of moons at zenith. Instead he criticized me for exercising my scarred legs while a moon was up. You'd think it would have reminded him that being inactive at such times was only a planetary habit.

It was impossible to question him along a consistent vein. He would start talking about their organization and end wondering about the possible influences on human behavior of subtle rhythms in gravity. He would open a conjecture about the daily habits of their Leader and it would end a theory on the psychology of island cultures. His long expressionless horseface would turn to me and he would conclude with something like, "You know, Herman Melville was right about the sea. It is not a vista but a background. People living on it experience mostly in a foreground."

Every Operator for The Central has at times to think profoundly about such things and be equipped better than average to do so. You can't deal effectively with the variegated human cultures now scattered far out into the galaxy without being neatly sensitive to the psychological influences of landscape, flora, climate, ancestry and planetary neighbors.

But at present I had a much blunter assignment. I had to reach a carefully protected man I had seen only in photographs. I had to reach

him in the shortest possible time and kill him. Now, the worst luck of all, my only Contact had "taken root."

It happened every day of course. Psychostatistically it was inevitable. A fine Operator hit a planet where he began to take an emotional interest. He adopted quite seriously one or more of the major habits of the natives. This man had reached the next stage where his emotional interest in his new-found "home" dominated his finely drilled ties to The Central. In his case it had taken only a standard month and a half. In fact it had not been visible a month ago when the pilot of my tiny space shuttle dropped me off in the dark at his cottage. I finally realized the only thing I could get from him now was a rehearsal of the story he had told me that night before I walked alone into the strange city.

But I delayed asking him to retell his story. An odd thing happened. It happened just as I was about to ask him to go into town and buy me a set of the local power equipment. We were on our usual morning walk through the fern woods. Naturally he had refused to exercise until the passing of the second orbit moon. That had irritated me. I was on the verge of spitting out that I was wasting time and would be on my way as soon as he could run into town and buy me the local harness.

There in the middle of the path lay my own power equipment—the harness they had stripped off with my clothes down on the tide shelf three

weeks before. If they had only left this harness on me, I would have been able to antigrav my way over the fourth sea wall instead of frictioning my way up on peeling flesh. I knew the harness and helmet on sight. I picked it up and I was certain. The hair at the back of my neck stirred.

I didn't say anything and he was still enough of an Operator not to ask. We both knew it was no accident.

Back at the cottage I spent the rest of the day and most of the night checking that harness of power equipment. There was absolutely nothing wrong with it that I could find. The radio, sending and receiving, was in perfect order both on inspection and when I check-called to my ship waiting on the second orbit moon. The arms, both the microsplosive for killing single targets and the heavy 0.5 Kg. demolition pistol were as they had been when on my person. The antigravity mechanism and its neatly built-in turbojet, part by part, under Xray and on the fine balance he used for assaying quartzcar specimens, was an unblemished complexity. Again, when the equipment's own Xray was turned on its tiny "field-isolated" radioactive pile, no flaw could be seen. Naturally that was something of which I couldn't be sure. Something that I couldn't detect with these instruments might have been done to that tiny power pile at the subatomic level. The Xray defraction patterns were O.K. but—why

did they want me to have my own harness? What reason outside the harness?

I had reduced to a simple question about its nuclear fission pile the highly multiple question, "Has this power equipment been tampered with?" I would have to gamble for the rest of the answer and it was worth the gamble. An Operator's power equipment is the best in the galaxy. From what I had seen of the equipment worn on this planet it was definitely second rate.

It was nearing morning but he was still sitting in a corner, his long melancholy face buried in the local books on quartzcar. One of them was titled in the native language, "The Planetary Evolution of Quartzcar." Well, it was not considered desertion to lose all interest in his assignment and all ties with The Central. It was just an occupational disease.

"You know," he said, suddenly standing up and walking to the greenish darkness of the window, "there are several piezoelectric substances."

"Yes," I answered. I was busy putting the intricate crystal plates back into the atomic fission pile.

"Quartz, of course, is one of them."

"Yes."

"You know how a piezoelectric substance behaves?"

I was annoyed. The job of slipping the countless delicate crystal plates back into the pile was exact-

ing. "Well," I said without bothering to cover sarcasm, "why don't you tell me all about it. I got through physics on a fluke."

By the galaxy, he took me seriously. He stood there staring out at the fern forest and talked earnestly about electroelastic crystals like I was a first-year physics student.

"These substances convert electrical to mechanical energy and vice versa. You know how the old-fashioned phonograph pickup worked?"

I didn't pay any attention to him.

"The needle was activated by grooved impressions made in a record by previous sounds. In the pickup device this needle pressed against a piezoelectric substance. Its mechanical movement against the crystal set up corresponding electrical discharges from it to the speaker." I was silent working on the pile. I decided that if he said, "You know" again I would get up and poke him. "You know," he continued, "every island on this planet is constructed from quartz—a piezoelectric substance."

I didn't get up and poke him. I continued to stare at the harness but I stopped working on it. He went right on without turning. "These constructions of quartz are subjected to rhythmic mechanical stress when the lunar tides pile up against them."

He was a capable man or he would not have been an Operator in the first place. That a man "took root" on some planet and became absolutely untruthworthy as an Op-

erator did not mean he was not still a brilliant and sincere man. This one was obviously trying to solve a serious problem and doing well at it. I looked up with a new respect and he turned from the window.

He couldn't help smiling and I had to admit he had slipped one over on me. He said, "You see, it could be that these quartzcar islands generate an electrical field as the tides press on them. The strange blind movement of some of the vegetative forms could be a response stimulated by that electric field. The cessation of animal movement could be a safeguarding adaptation preventing diseases which might develop when strenuous activity is pursued in the presence of such fields."

I couldn't help grinning. I had been blindly driving ahead because the assignment was urgent and I had missed all this.

"I realize," he continued, "that I have taken root but I think it is important that I was trying to solve the defeat of our first operation when I first took up the question of quartzcar."

"You know," I interrupted, "they treated me just as they treated your group—just as you described it to me that first night. They left me absolutely alone—no interference at all. I knew I was asking for it when I overplayed my hand. But I had to do something to get action. Up to then it was like working in a vacuum. You wouldn't have guessed there was a party. There was no sign of them."

It was, only by boring in with the full intention of killing the Leader if I wasn't stopped that I finally forced them to show."

"Yes, that's how it was with us," he agreed. "Not one of the six of us met any interference until in a period of thirty seconds in various parts of the city two crashed from heights as though the antigravs had suddenly failed, two were blown to bits and one just simply died while walking through the rotunda of the Government Building where he was supposed to create a divergence in ten seconds."

"But why did they spare me? Was it because taking a shower was so innocent? If they could so neatly blow the whole plot wide open just at the moment it was climaxing they must have realized my part in it. They must have known I was innocently occupied taking a shower only because it was not my moment to be in action."

"Within seventy seconds their Leader would have been dead. Instead five of us were dead. It took me a long time to figure out that that was not due to a lot of concerted planning on their part. They had known it was going to happen at a certain time with no help from them. They knew *when* we were going into action and knew *therefore* that we would fail due to some calculable force. It wasn't necessary for them to interfere if we didn't plan to act before a certain time."

I nodded, "And I got what was coming to me because I went into

action before they could calculate my defeat. Well, then the quicker I try again the better. I'm going in this morning." He almost volunteered to go with me.

"Back in the city my mutilated face created attention. When I anti-graved onto the sixth floor balcony of the Great Island Hotel people at nearby tables of the open-air restaurant turned to stare and turned quickly away. The table I had hoped for was unoccupied. I took it facing away from most of them so I could see the entertainment stage. Beyond the stage, as it was viewed from this point, were the antigrav tubes of the hotel. They were transparent and in them people rose to the upper floors, or descended to the street without need of harness such as I was wearing."

The waiter came and took my order for a drink. He didn't recognize me, yet he and I had had a joke once about that drink.

My watch said it should be only a few minutes before she would be on the stage singing quiet little songs. It was on this stage that their Leader had first seen her. His only overt human quality was an interest in tall lanky women. He liked them at least eight inches taller than himself. This one he had promptly moved from the artists' and actors' quarter of the city to a penthouse atop the Great Island Hotel.

Presently the string trio she used for a background came out and lounged about the potted trees on the

ASTOUNDING SCIENCE-FICTION

stage. They warmed up with a few dolorous little melodies. Beyond the stage the antigrav tubes were crowded. In one of them a tragic waterfall of humanity descended to the street level. In the other people drifted upward. Occasionally a person or couple in more casual ascent hesitated as they passed the restaurant and decided to come in for a drink.

The string trio started another number and she walked gracefully out onto the informal stage. She smiled on her audience with a possessive warmth that was half her popularity. Then she began singing in a husky, unmusical but dramatic voice. She was a beautiful girl all right but my attention was suddenly diverted.

I recognized the short scrawny one immediately—the big man when he spoke. "Say, I never thought we'd see you again. Mind if we sit down?" He waited politely.

I motioned to the chairs. "Say," he chuckled, closer to my face, "we sure did a beautiful job on you, didn't we?"

"Yes," I agreed, "I owe you both a great deal."

He had a big hearty laugh. "Well," he gasped between guffaws, "no hard feelings, I hope."

"I'm very objective. I understand it was all in a day's work."

"Sure," he said solemnly. "Let us buy you a drink." The waiter had come up.

I shrugged at my glass. "I'll have

the same. There's no strychnine in it."

That set him off again. "Say," he burbled, "you're a card. You know when I first took a shine to you?"

I declared I couldn't imagine when it might have been.

"When I broke your arm. You really took it like a man. Didn't he take it well, Shorty?"

The little man wasn't saying anything. He was making his good-humored grin do as his contribution.

"Well, here's to your health." The big man raised his glass the minute the waiter set it down.

I drank with them and we sat in silence listening to her song until he called the waiter over for another round.

"Yes, sir," he exclaimed when it had arrived. "I sure never expected to see you again."

"Oh, you knew I got off the tide shelf. That's why you planted my power harness so I'd find it." That took the humor out of his eyes.

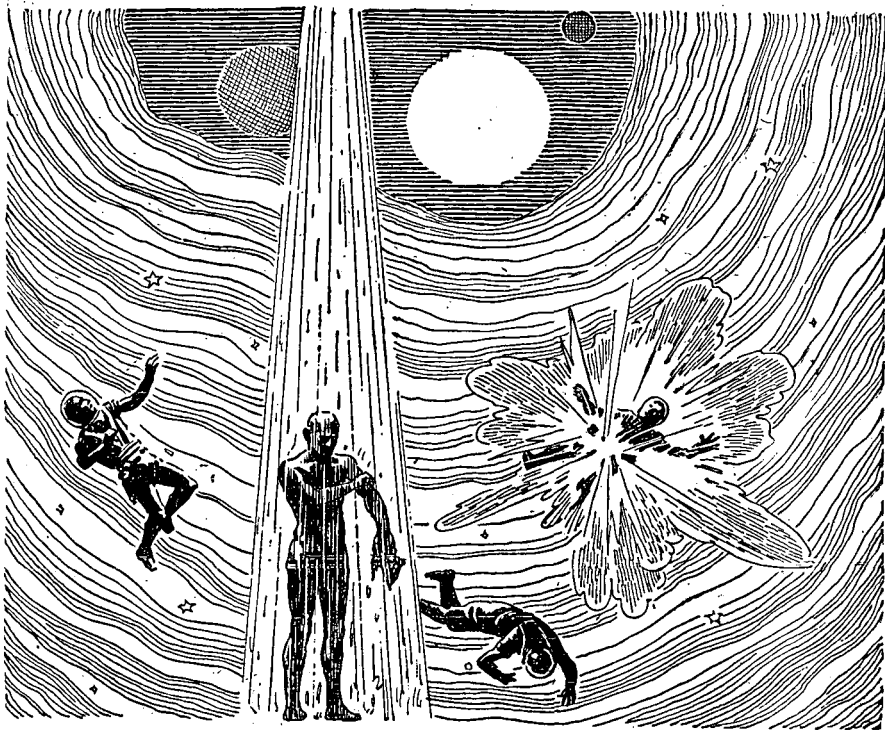
"I don't get you," he said in a level voice. The little guy had stopped grinning.

I explained about finding my power harness on our path in the fern forest.

"I think," he said with finality, "some animal dragged it up there. We left it on the tide shelf." There was ice in his eyes.

"That could be," I said; knowing it could not be.

"Waiter," he called, "bring us another drink."



Well, they had me and they weren't letting me go. I was going to have to sit quietly in the public restaurant of the Great Island Hotel and get drunk without making a scene.

It was getting on to noon and there was a big moon hitting its zenith. Activity in the restaurant was beginning to slow and there were fewer people in the antigrav tubes. She was singing her last number backing off stage with the trio.

I looked at the big man and his scrawny companion. There was one good solid reason why they had suddenly showed up and why they were

gluing themselves to me. The Leader was up above in his Great Island Hotel penthouse waiting to spend the luncheon with his long lanky beauty.

How long would the siesta last? I wasn't very far into that thought when I came up with a start and my hand stopped in the act of putting down my glass. They both glanced at me.

All five moons were going to be overhead at noon. They would lift the sea onto the fourth tide shelf. That was the biggest tide and it was rare. I calculated the last time it had happened was over a standard

month and a half ago. If my sudden guess was right, the healthiest place for a Central Operator at that time would be in the shower.

"What's the matter?" the big man asked in a monotone. "You worried about something? You afraid you're stuck in bad company? Don't worry. We just want to have a couple more drinks with you and then we have to leave . . . in a hurry."

"Thanks. I'll sit the next one out. I want to have a little talk with that singer." I stood up and he grabbed my arm, the one he hadn't had any practice breaking.

"I wouldn't do that if I were you." He tightened down on the arm. But my advantage was the secrecy they needed.

"You wouldn't want a scene, would you?" I shook my arm loose. People were beginning to take notice and he sat quietly glaring at me.

I beat it through the stage door and back to her dressing room. I stepped in without knocking. She looked up startled from where she stood buckling a belt to her lounging shorts. She didn't recognize me and she didn't like me.

"Get out of here."

"You remember me," I soothed. "Three weeks ago you and I were regular pals. One night you went so far as to introduce me to a couple of special friends of yours in an air-car down there on the street."

She was genuinely horrified and began backing away. I walked toward her. "You thought they were going to kill me, didn't you?"

She nodded dumbly. Then, "For the Leader—" and automatically remembering another Party slogan, "for Planetary Security."

"You didn't know they were just going to torture me?"

She shook her head piteously almost imploringly—a little provincial girl caught in something bigger and uglier than she had dreamed.

"And leave me alive to come back and ask you questions? Admitting the pleasure they took in how badly I would suffer when I regained consciousness how could they afford to take the chance of leaving me alive?"

"Because you will die anyway."

There was an abrupt personal fright on her face. She raised her hands with the palms outthrust as though pushing the sight of me away.

I thought I saw something move at the open window and changed my position in the room backing from her. She was almost wailing, "You will die now . . . the tide . . . it's almost—"

One thing they weren't taking chances with was that I might radio her answer off the planet.

The scrawny devil popped up from where he had been antigraving at the window and the microsplosive he put in her chest made her dead throat shriek as the long beautiful legs crumpled to the floor. I blew his head off while her glaring face sank before me. His body spun but antigraved where it was till I got to the window to haul it in.

From somewhere above the big

guy fired at me as I yanked the body in and took the harness. I peeled out of my own power equipment and threw it in a corner and got out of the room. In a washroom down the hall I adjusted the little guy's harness to fit me. As I stepped out into the hall again there was a shattering explosion from her dressing room. I had got rid of that harness one hundred twenty seconds soon enough.

There was one spot the big hoodlum wouldn't be looking for me. I went right back to my table in the restaurant. There was, of course, no activity or conversation between the few who had stayed at their tables during the high tide. People sat in silence and seemingly asleep waiting for the moons to pass. I knew from experience that in that condition they would resist hearing my voice. I kept it low and held the radio pickup of the harness close to my lips.

After some hunting around due to the unfamiliar controls I made contact with my ship on the second moon. I told them where and when to pick me up. "Now," I said, "in case I don't make it get this down: Piezoelectric islands generate field in response to lunar tides. At highest tide this vibrates the field generating crystals of the fission pile in Operator's harness. Under interfering frequencies, radioactives jar to critical mass and explode. Local harnesses do not react."

I was just leaving the table preparing to antigrav outside the building to where that penthouse hung in

the mists fifty floors up when I saw my Contact racing toward me.

"I've come to help . . . I guess I still—"

"Get out of your harness. Throw it over the edge of the balcony."

He didn't ask questions. He hurried to the edge unfastening the harness. But from up in the mist they opened fire on him and he never took the harness off. He refastened it and antigraved swiftly up into the mist firing ahead of him with the heavy 0.5 Kg. demolition pistol set for proximity explosions.

That was quick thinking. Up there they might be antigraving alongside the building or they might be firing from windows and the unconfined proximity explosion was more likely to get both.

I followed him as fast as I could with the weaker harness I was wearing. I pulled out farther from the building to back his fire. We had both dropped the infrared viewers out of our helmets but in that mist they weren't much good. The mob above was having the same trouble and we were moving targets, hopeless for proximity fire. Our guns laid a sheet of flame high up on the building.

I believe he was hit but not killed on the way up. He seemed to stagger in his swerving ascent. But immediately their vantage came into view—a balcony surrounding the penthouse. Our fire had driven them back a few feet and he antigraved like a streak up over the edge.

There was a blinding flash and I reached the roof garden to find the mob of them dead in the explosion that had disintegrated him. One whole wall of the penthouse had been blown in. I leaped through this wreckage. The big man—the man I owed so much—was getting to his feet. Apparently he and two others with him had been guarding the door beyond. He looked surprised when he saw me. He must have thought till now it had been I who blew up out in the garden.

I slammed a target-set 0.5 Kg. demolition shell into them. It also blew the door apart. Across the room beyond their surprised Leader was sinking into the antigrav tube. He fired quickly and wildly and I fired a microsplosive from my left hand.

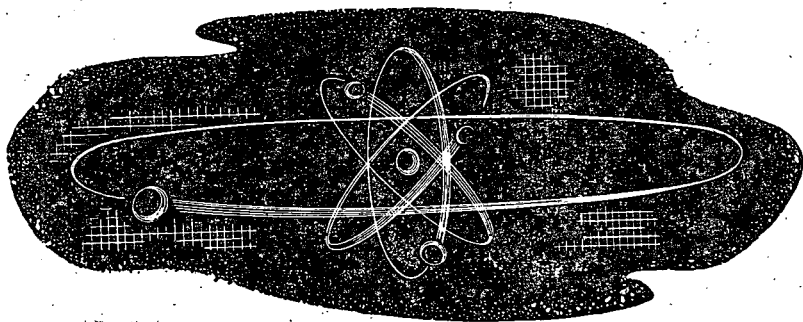
I thought I saw the shot get him but I dashed to the antigrav tube to make sure. Past shocked tenants who had rushed into the tube to escape the explosion-wracked upper floors his headless body lolled its way. The

body, unmistakable in the distinctive white uniform he always wore, drifted down the tube stirring as it went a welling murmur.

The psychostatisticians back at The Central get my vote as the "white haired boys." This was the first time in two hundred standard years that their anthropoquations had described one man and his lieutenants as the "cause" of a war movement. Generally the picture they turn up as "casualty" in a war is spiny with factors and it takes an army of Operators to cover all the angles. This time they had come out a little shamefacedly and said, "It looks like old-fashioned newspaper thinking but for once it's a fact. Get that one man and there will be no war."

As I leaned over the "down" antigrav in the Great Island Hotel his body drifted to oblivion. The murmur rising from the viewers had horror in it. But there was also an unmistakable note of relief. Finally, from far below, someone asked, "Did they get the rest of them?"

THE END



DISCONTINUITY

BY RAYMOND F. JONES

Theoretically, the Reconstructed people should have been better off than before their death. But it looked very much as though "better" in this case meant "crazier". And it shouldn't have . . .

Illustrated by Miller

The middle-aged blond woman was like a sleek and expensive cat. Now, she was afraid. Her bruised face swathed in healing bandages, she sat in the big chair by the window of her husband's office and watched his desk and the circle of his associates who were ringed about her.

She could feel hate like a hot radiance emitted by each of them. Their eyes stared as if she were some animal not of their species.

She spoke again. "I cannot give my permission. I would rather have David dead than—than like those others. Far rather!"

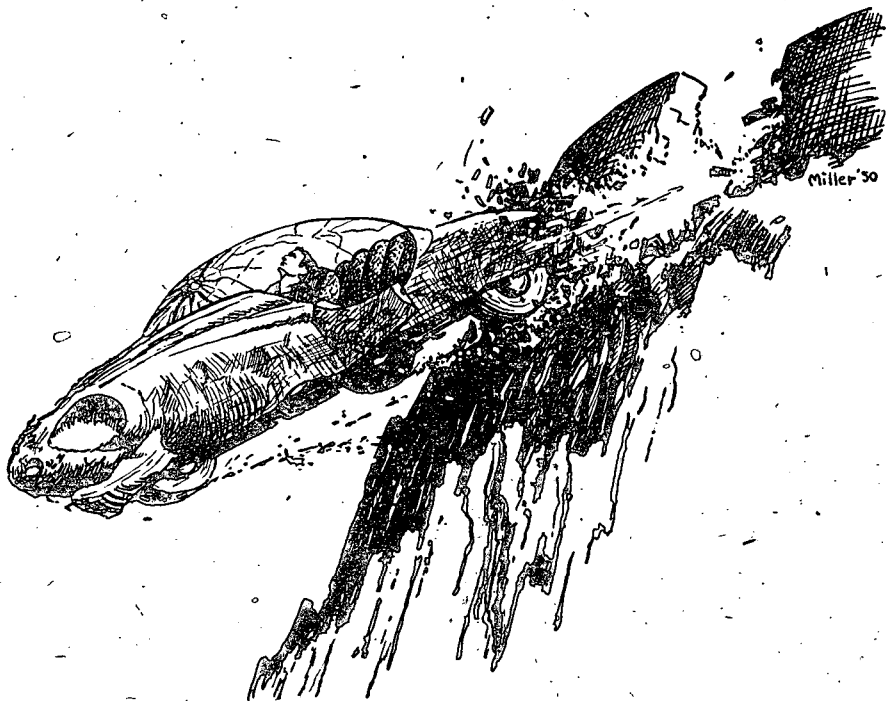
It was the third time she had said it and it only increased again the hate that surrounded her. Momentarily, she shrank in the chair. Then,

as if she had retreated to a point beyond which she could not go, she sprang at them.

She stood erect in their midst, trembling with a fury that for once forced them back. "Stop staring at me that way! I'm his wife. Do you think I *want* him dead? You claim to be his friends, but if that were true would you offer him a return to life with an idiot's mind?"

She turned to one end of the circle, paused, and turned again, glaring at each of them in the maddened, cavernous silence.

There were the young laboratory girls in white smocks. They were all in love with David, she thought. There were the earnest college boys working out research seminars at the Institute laboratories under David's



direction. They had come to plead for David's life—as an idiot.

At last, from the rear of the circle, the moment of balanced hate was broken. A tall, gray-haired man stepped to her side and took her arm.

"Will the rest of you please leave?" he said. "I would like to speak with Mrs. Mantell alone for a few minutes.

They hesitated, then turned. Silently, she watched them go, but she wanted to cry out for them to remain. Her fear of any one of them alone was greater than that in the presence of all. It doubled as each of the two dozen filed through the

doorway. The last one closed it behind him.

Dr. Vixen, who remained, was her husband's first assistant and co-developer of the Mantell Synthesis. Older than David, he had the serene and confident bearing of a man who is aware that most of his life is behind him, and that he has spent it exactly as he would have wished.

He leaned back against the desk and placed his hands upon it. Alice Mantell slumped back into the chair as if he had forced her down.

"Now, I will answer the question you asked, Alice. Yes—I *do* think you want David dead. Regardless of the condition of his mind or his body

DISCONTINUITY

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you want him out of your life."

"I'll not listen—"

"Sit down and shut up, please. There are great peculiarities in the accident in which you and David were involved. Not the least of these is your own miraculous escape in comparison with his great brain injury. A suggestion to the police concerning this, along with a report of your own infidelities towards David would certainly result in a lengthy investigation, to say the least."

"This is how they might reconstruct it: Your friend, Jerrold Exter, was hiding in the darkness of the back seat of the car when you and David got in. There was no occasion for David to glance back at him, almost invisible in the darkness."

"It was some sort of compressed air mallet that Jerrold used to crush David's skull. Then you got out and let the car plunge through the retaining wall at the end of Mayview Drive. You managed to beat yourself up a little so it wouldn't be too suspicious looking. And if the wreckage hadn't been spotted within a few minutes you might have succeeded in your plan."

The thing that she had feared was here, and with its coming the fear dwindled. Her heavy breathing slowed, and her face recovered from its whiteness.

"You mean this for blackmail?" she asked.

For a moment she believed that Dr. Vixen was going to hurl himself upon her, and the rage she in-

cited within him was curiously pleasant to her.

"I want David," he said evenly, at last. "I want him alive and well. In return, David will certainly be willing to be relieved of your presence for the rest of his life."

"So he has lied to all of you about me!"

"We'll let that go," said Dr. Vixen. "You agree?"

She nodded quickly, again like a cat, striking for what seemed a precious offer of freedom from punishment; and security from the thing that she had loathed. She was going to be free at last of the incredible, alien world in which David Mantell lived, to which she had been bound by fifteen long years of marriage to him. For a time he had dragged her along like a small child at a fair that displayed things beyond her comprehension, and then he had abandoned her because she had failed to understand.

She relaxed in spite of Dr. Vixen's awareness of her evil, partly, even, because of it. "Do you think I'm bad?" she said suddenly.

He shook his head. "There are no bad people. Only sick ones, stupid ones, ignorant ones. David would have told you that. He would have let you go long before now if he had been sure that you wanted to."

"But I did want to! Surely he has told you that if he has told you anything."

"He always seemed to think there

was a chance. You see, he loved you."

He was sorry when he had said it, for in the presence of this woman it was as if he had exposed his friend's nakedness to an obscene gaze.

But Alice Mantell startled him. Her eyes softened and the catlike tension of her body relaxed for just an instant. "I loved him, too," she said, "once—"

"Perhaps you can remember that, then, in giving the assistance that we need."

"You have my permission to perform the Synthesis! What more do I have to pay for my freedom?"

"You have misunderstood because neither you nor they"—he nodded towards the closed door—"are aware of all the facts. Your permission to perform the Synthesis on your husband is relatively unimportant. Lack of it would be just one more illegality that would not have stood in our way.

"More important, Dr. Dodge, the Institute's president, notified David only this morning that the Synthesis was banned, and the operation is now illegal with or without your permission.

"Those youngsters out there don't know it yet, but our careers and professional freedom are at stake as well as David's life. I'll tell them, of course, before we go ahead."

"What are you talking about? Why is the Synthesis forbidden?"

"The *others*—the first hundred Synthesis patients you mentioned a moment ago. The group who have

made the Mantell Synthesis a one hundred percent failure so far. The public and the politicians have decided there are to be no more like them, regardless of possible benefits."

"Will David's be a failure, too?"

"We have no reason to believe otherwise."

"You're insane!" She rose and backed away as if in sudden fear of his madness. "Why will you persist in a deliberate failure that will turn him into an idiot?"

"Because—he is wholly lost to us otherwise. This way, he will at least be alive. As long as he is alive there is hope. And, finally, because he would have wanted it this way."

"You're devils of the same litter."

He took her from the office into the Synthesis laboratory. There, her fear returned. She had been afraid all her married life of the world in which David walked. He could tear apart the brain of a man, cell by cell, and reconstruct it in the image of a living human being.

But she never had believed it could be anything but dead. David had penetrated to the very core of life—and had found nothing there that she could embrace. Sometimes—long ago—he had tried to tell her of the vast and intricate molecules that were the essence of a man. He told her the long and incomprehensible names of those protein structures that held the memory and intelligence of man. He could show her, he said, the exact cluster of molecules that held his love for her—and

that, she thought, was the moment in which she stopped loving him.

The room was full of compact masses of equipment and long panels that ranged the entire length of the laboratory. Overhead, great cables and high-frequency pipes wove in intricate streams to knit the masses together. Like the interior of a great, expanded skull, this would be the kind of creation that David would build, she thought bitterly.

"Will I . . . see him?" she asked.

"No, that will not be necessary.

We require what is termed a neural analogue so that those factors of David's life involving you may be reconstructed. Some patterns are inevitably lost, of course, but for the most part he will remember you and all that has passed between you."

"I should think you—and he'd be satisfied—to have that forgotten."

"No. It is important that every possible element of his life be reconstructed and re-evaluated. Loss can be kept at a minimum that way. Your analogue, for example, will restore all that he has ever done or thought in connection with you, every opinion or feeling he has expressed to you or which has been colored by your presence. Then we will call others who will contribute their share, but yours is among the most important."

She shuddered in revulsion. "No—you can do without me. I don't understand what you are talking about, but you can get along without me."

"We can't! Your mind holds the

greatest part of the pattern we need. David's life is within the cells of your brain."

"I can't do it—I won't. I'm afraid of all this." Her eyes scanned the far ceiling where the webbed cables looped in ritualistic patterns. "You can't make me—"

"The accident—remember?"

"Some day I'll kill you," she sobbed.

A nurse assisted her in the preparations. Sick with fear, she permitted her clothing to be exchanged for a plain smock, and then lay upon the padded couch while the score of electrodes were carefully oriented and pasted to her skull. The paste had a thick, nauseating smell that made her stomach contract violently.

She was given then a gentle anaesthetic to control her voluntary thoughts and movements and was left alone in the faintly lighted room.

While Alice was being made ready, Dr. Vixen told the technicians of the Institute's ban on Synthesis, offering each of them the chance to leave. None did. He wished he hadn't had to tell them, but he had no right to make the decision for them though he felt sure of what each of them would do.

All of them were nervous and tense. As a group they were acting on their own in a move in which David had always been there to lead. The tension was multiplied by the fact that it was he upon whom they were operating. So great was this tension that they held almost

reckless regard for the ban of the Institute. Yet each knew that he was gambling his whole future life and career in this illegal step.

Dr. Vixen, watching them, sensed the nervousness that threatened the very success they wanted so badly, but he could do nothing now to help them. David had trained them well. They would have to rely on the excellence of that training.

He gave the signal for the beginning of the exacting, laborious process of transcribing the data from the mind of Alice Mantell to master molecules which would, in turn, be used to recreate large areas of the shattered brain of David Mantell.

From his glass observation window Dr. Vixen watched the inert form of the woman. Even in the drugged sleep her face held the cast of bitter lines. It was hard to remember, he thought, that she was only a sick child, a bewildered woman who had never understood the shadow of greatness in which she stood. It was hard to forget that she had broken the heart of David Mantell, and in the end had tried to kill him.

Somewhere, in her youth, there must have been a tone of gentleness, a graciousness and sweetness that David had loved. He would not have married her if she had been so wholly without charm. What had happened to it in the years between? Dr. Vixen did not know. He had heard David's story in snatches of unbearable bitterness that David

had sometimes found impossible to contain. But he wondered if Alice might not have her side to the story, too.

A hurried call from one of the technicians brought an end to these considerations. He hurried to the post from which the man called. On the screen of the electron microscope there he saw the image of the pattern molecule that was building, being shaped by the impulses from the mind of Alice Mantell. It was a hundred thousand times the size of the one that would ultimately take its place in the reconstructed brain of her husband.

"Pathological, type 72-B-4," said the technician. "We can't possibly let that series go through! That woman's sick."

"What area are you working with now?"

"It's in her formulation of her relationship with Dr. Mantell."

Dr. Vixen gazed at the image forming before his eyes. Here was proof of just how sick Alice really was. Ordinarily, he would have nodded without hesitation. Such a malformation should never be allowed to reproduce. But this was different. This was David, who knew more about the Mantell Synthesis than any other man alive. Dr. Vixen hesitated to deliberately modify a single factor that might alter the life and personality of his friend.

"Let it get as far as the selector banks and see what happens," he said.

The technician opened his mouth to protest, then shut it without a sound. He dared not utter what he thought, and to say less was futile.

But Dr. Vixen understood perfectly well what the man was thinking. They were in an uncharted field with only a few hard-won rules to guide them. It was foolhardy to abandon a single one that had been found to be empirically correct.

For centuries men had stood in yearning awe before the mystery of the human brain. Decades of skilled medicine passed before the smallest clue to its functioning was uncovered. That came in the discovery that the brain is mechanically analogous to a great punched-card machine—all the endless data that compose memory, emotion, intellect, reason—these are arrayed as on stacks of punched cards.

It was Von Foerster whose work suggested this analogy, who showed the possible nature of the punched cards in use within the brain. He demonstrated them as punched molecules, immense and intricate protein structures in which the atoms were stacked and arranged and tied together in a precise pattern, which pattern represented an item of intelligence.

Later, every control function of the human brain and body was found to originate with these figurate molecules. Some were trigger devices controlling circulating, delay-line types of storage for definite but transitory periods. Others, formed at birth, perpetuated them-

selves throughout the life of the individual and controlled the involuntary functions. The bulk of them, however, were proven to be occupied with storage of data.

Von Foerster's work produced a tremendous impetus in brain research, but it raised more problems than it solved, and it was centuries again before these were answered.

With a library of molecules numbering 1021 it seemed an impossible task for the brain to select and read off the data represented by any single one. Utterly impossible time intervals were implied if the process of selection went on by examining every molecule one by one.

This was obviously not the means.

Carstairs broke the impasse by the demonstrated application of the principle of molecular resonance. He showed that not only was each figurate molecule a punched card carrying data, it was also a tuned, resonant, circuit unique among the endless numbers in the human brain.

He uncovered the mechanism which Von Foerster had overlooked, the comparatively insignificant number of molecules which formed a selector bank. These, Carstairs showed, were tuned by stimuli and aroused responses in the distant banks of punched molecules, which were sent along the neuron chains to cancel the punching in the selector banks and present themselves as required data. Multiple resonance provided the cross-indexing necessary.

David Mantell had been a student

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of Dr. Carstairs. The great scientist had been a very old man then, but he had bestowed upon young Mantell the frustrated yearning to know all the secrets of the human mind.

The student, David Mantell, became Dr. Mantell, and in so doing provided the medical world with its most brilliant technique in thirty centuries of its history. He developed the Mantell Analysis, by which it was possible to probe the human brain and determine the exact molecule bearing any given piece of information.

That alone would have given him an immortal name, but he was not content with only half a step. The full pace consisted of being able to duplicate or repair such a molecule and insert it into the vast mechanism of the mind if need be.

With one sweep he eliminated the centuries old butchery of lobotomy and topectomy which had maimed hundreds of thousands in its long fad.

Or would have—

To date, his experiments had resulted only in intensifying the very conditions they were designed to heal.

In a hundred cases of extensive brain damage, his process had restored life, but only in varying degrees of hopeless aphasia.

At first the public hailed the magnitude of his stride, then, revolted by the horror of his failures, they had turned against him with a mighty clamor. Fed by the public affairs observers who shaped opin-

ion of the clay or rumor and prejudice, the clamor had forced the politically fed Institute to ban the Synthesis.

And now David Mantell himself lay with a bare speck of life possessing his body. The back of his skull had been crushed and sixty percent of his brain stuff destroyed. He lay with a probe in his spinal column conducting mechanically generated, "wired-in" pulses to the organs of his body that the chemistry and mechanics of his corpse might still go on.

Alice Mantell could not have known by any means, Dr. Vixen thought, that she was providing the very next step that David had planned—though hardly in this degree.

He had planned to submit himself to Synthesis surgery to learn, if he might, the answer to the failures that he had produced. But it would have been gently and slowly, molecule by molecule, with constant checking, describing, and analyzing. Now, more than half his brain would have to be rebuilt, and of all his associates there were none who doubted that he would become a schizophrenic horror.

If one single spark of the old intelligence that was David Mantell should succeed in breaking through and giving just one clue to the failures, they knew that he would have been willing that the Synthesis be done. And it was worth the risk of their professional lives.

But Alice wanted him dead because he had chained her in a prison

from which she wanted to flee. She wanted to be free of him forever, and to have been chained to an idiot would have tripled the horror of her prison.

She was a poor murderess. Her guilt had screamed from her sick eyes, and they had all interpreted its message. But none of them would talk—not now. The bargain that Dr. Vixen had made would be kept.

II.

He awoke, and was aware of consciousness. There was thunder in the Earth, rippling sheets of light blinded him. He endured the pains of primal birth and felt suddenly alive as if sprung from the head of Jove.

The chaos was dying slowly, but it would be a long time before he ordered it, catalogued and tamed it. He waited confidently and with restrained exultation. To be alive was to be a god.

I am David Mantell, he thought, but more—much more than David Mantell ever was.

He thought then of Alice, and in this there was pain. He had never understood her—poor, stupid, bewildered little Alice. He had tried to lead her in his direction, and when she had floundered he had abandoned her. He had been stupid, too.

He remembered the ride in the car. He wondered curiously if he had actually failed to comprehend her intention beforehand. He sup-

posed he had, but such ignorance seemed incomprehensible to him. He thought of Alice lying in the wreckage with torn clothes, and bruises on her body from careful blows by Jerrold.

He wanted to weep for her suffering, not of her body, but of her mind. He wanted to weep because she had believed she must be beaten and abandoned in the wreckage to be free of him. He wept because he had not known how to lift her to dignity and courage and esteem in her own mind.

He would make it up, he thought. He would make it all up to his sick Alice and heal her. There was half a lifetime left to them. Surely it was enough to erase the errors of the first half.

His body was little damaged, but his brain had been subjected to the Synthesis. Fully aware of this, he arranged the known in precise order and shelved the unknown for later consideration, but of it all he became master.

He was alone, but they were watching him, he knew. The room was dimly but pleasantly lit. Furnishings, books and journals were familiar. That was the way it was always arranged—the way it had been for the hundred failures before him.

But *his* Synthesis was no failure!

For the first time, the tremendous impact of this realization settled upon him. He was alive, aware of himself and his past. He was alive when he might have been dead. And the work of his own hands and brain

had made it possible.

He sat up on the edge of the bed, examining the physical sensations: He felt normal, yet there was a newness that he could not define.

Then the door opened slowly, and Dr. Vixen stood there, letting himself be recognized.

David Mantell smiled. "Come in, Vic. Everything's fine. I feel as if I'd had no more than a slight bump on the head. I imagine you must have had quite a repair job, considering the jolt I got from Exter. Sit down and give me the details of what hap—"

David stopped smiling. "What's the matter, Vic? Why are you looking at me like that? Why—?"

Dr. Vixen was staring, his face reflecting sickness of heart. Then he finally spoke. At least his mouth and lips moved, but his words were sheer gibberish.

David felt panic, like cold water rising swiftly about his chest. "What's the matter with you? Talk-sense! Give it to me in English!"

Vixen spoke again, and still no understanding came. David had risen in greeting; but now he edged away until he collided with a desk. He passed a hand over his face and heard the man's voice again. He barely sensed a connotation of dismay and anxiety.

Then he thought of the others, the hundred others who had preceded him through the doors of Synthesis to a prison of aphasia that could not be opened. *These* had spoken gibberish and had under-



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stood nothing said to them.

In sudden desperate horror, he grabbed a pencil and a pad from the desk and scrawled, "Vic, can you read this?"

Dr. Vixen stared at it with growing pity. He backed towards the door, retreating as if from a phantom. "Sit down, David. I'll get Dr. Martin and be right back." And he knew it was silly because David Mantell could not understand a single word.

David remained motionless for only an instant after he was alone. He knew what his fate would be. Visual, auditory, ataxic aphasia—schizophrenia—they would put a label on him and lock him in a jail. They'd lock him up for the rest of his life because somehow he had become imprisoned behind an incredible wall of communication failure.

The Synthesis was not a failure. There was only this one terrible defect that put its patients in a prison of noncommunication. He thought of the first one—over five years ago. A young man, an artist of superb abilities whose head was injured by a falling rock on a mountain vacation. Fifteen percent replacement, David recalled, and the fellow had been in solitary hell for that whole five years.

David did not know how the error had come about, but he had no time to analyze or consider the technical aspects of the problem. He had to get away.

He opened the door and cautious-

ly scanned the corridor. Sixty feet away was the door to the exterior, but his nakedness prevented escape that way. In the other direction lay the great laboratories. The assistants' locker rooms always contained miscellaneous spare items of garb.

He ran swiftly in that direction. Twenty-five feet of corridor, then down a spiral stairway. At the foot of it he could look directly into the selector room. Vixen was there with Martin, a serious young medic. Their faces were bleak with the futility of their arguments as they scanned the files of David's Synthesis. The technicians were gathered around, listening to Vixen's story and the discussion they had all heard a hundred times before.

He had to cross in direct view of anyone looking towards this open exit from the laboratory. He waited impatiently, scanning the shifting positions of the people within the room. Then, for a single instant, he detected—almost predicted—that none of them were watching the hallway.

He darted across and into the locker room. He would have slugged anyone who appeared now, but he found himself alone.

Within seconds, he found and donned a pair of baggy brown trousers, a slip-over shirt and a pair of decrepit shoes that someone kept for rough maintenance work. He collected a bundle of articles and tossed them into the incinerator chute, but he grabbed up someone's dark coat and kept it, for the evening

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was cool.

It was dusk already when he opened the door towards the outside and stepped into the laboratory grounds.

He walked carefully away from the buildings, slipping from one to another of the shrubby groups that lined the drive. He abandoned his car. They could easily trail that, but it would take considerable time to make up a description from the things they found missing from the locker room.

He walked along the street and mixed with the passers-by. The laboratory seemed after a little while like a world he had known only in a dream.

Suddenly, he stopped and stood still, letting the mob flow about him like turbulent waters. Never had he loved the ugly, grotesque, hurrying crowd as he did now. He felt the jostle of bodies with the same sensual joy that a child might experience driving his arms full length into warm sand on the seashore.

He did not hear the fat man who turned and snarled, "What ya think ye're 'doin' standin' there in everybody's way" Nor the salesgirls who caught sight of the expression on his his face, and laughed.

He heard their muffled words on every side, and there was no meaning whatever. They were like words beyond a thick wall that deadened only the meaning but not the sound. But this was a wall that defied his efforts to tear it down because it could not be seen or felt.

He saw the smiles and lines of tension and hurry upon the faces, and was wholly a stranger in their midst. It was slowly becoming a physical agony, that urge to speak out and identify himself with the company of men. He wanted to take the hand of someone and say hello and be understood.

But there was no one who would think him anything but a fool.

He moved on again in the dusk, remembering locations of streets, but the signposts he could not read. Everywhere, the signs, the advertisements were as mystic symbols of some order into which all this vast throng had been initiated. Of them all, only he stood in naked ostracism. As darkness increased, there was a lull in the crowd between going home from work and the return to the streets for pleasure. In this time he sensed the beginnings of real hunger, but he had no solution. He recalled vaguely the need of money, but the symbols were less than shadows of memory. There was no money in his pockets. He could not beg enough for a meal. He dared not open his mouth.

There was his own home, of course, but the police would be watching for him there. Alice would certainly report him—provided she didn't make another blundering attempt to kill him.

He could not go home.

Through the evening hours he ranged among the pleasure crowds watching the faces of the dull, con-

teented men and the pretty, flirtatious women. With increasing wonder he scanned as if for something lost. He knew not what it was, but these among whom he searched seemed imperceptibly decreased in stature, and his panic grew.

With furious haste he almost ran among them peering at the face of each to whom he came, as if for a lost and forgotten image of himself. But these were not of himself—they were more than strangers; they were like foreign beings he had never known.

With each minute and each hour all that he looked upon became more alien and he more lost. While the beckoning urge to unite with them had not ceased, the gap across which he watched steadily widened. As if it were a spreading chasm in the Earth with him on one side and all mankind on the other, he saw himself hurled back and away while those for whom he yearned dwindled and diminished and were wholly unaware of any gap.

As darkness settled down for its long haul through the night the streets became increasingly deserted. Lights went out on signs and store fronts and he grew in conspicuousness as he moved in solitude about the city.

Almost alone, he ranged the streets with swifter pace and growing rage like some great animal clawing and thundering at the darkness of his loneliness. He paced before the perforated cliffsides of man's own making and watched the

shadows against the little square flames, each marking the place of a man, side by side, row on row, until they seemed to reach the stars.

He raged through the city and into the hills above town where he sat at last upon a granite rock, suddenly motionless and still as if straining to unite with the Earth itself. Only his eyes were alive watching and dreading the coming of day and the awakening of the city.

He dreaded the blinking traffic beacons and suppressed a cry of fury at the neon lights with their beckoning invitation to a world he could not enter.

He slept at last there on the hillside, lying against the granite boulder that was still warm from the day's heat. He was later aware only of lying huddled on the ground and the Earth was full of chill. The sun was slow in its warming of the face of the hill and he was depressed with hunger.

Below lay the city. He felt like a traveler who had arrived at a destination in the darkness of night. It was not merely the old transformed now. It was wholly new—and incredibly ugly. Yet it gave a sense of perspective that his hasty night flight had denied him.

Surely the situation was not as impossible as it seemed. Somehow he could prevent them from locking him up as aphasic or schizophrenic. It was unthinkable that there should be a complete barrier to communication between him and the world.

If only there were another of his

kind with whom he might talk to diminish the unbearable loneliness of being the single member of his species in a strange and savage world.

Another—there *were* others, he thought. A hundred others! His throat caught in a sudden agony of relief as he wondered how he had forgotten in the night.

But the relief was short lived. How could two aphasics talk with each other? No solace or assistance could be offered by another of his kind if they were both in individual prisons. The barrier was doubled instead of broken.

He sat upon the rock again, knowing that in the hours to come he'd have to go down the hill to—somewhere. But for the duration of this instant he could remain.

His thoughts went back to Alice. He was aware of a sympathetic and lucid understanding of her that made him appalled at the thought of the blindness with which he had walked through the years of their marriage. They had started out with something fine and lovely between them, and he knew what had become of it now, he thought with startling clarity.

Alice had been sick even then. Her love for him had been genuine, but she could not come to marriage prepared to give the companionship it demanded—either to him or to anyone else she might have married. Her aspirations were chaotic and turned in upon herself.

And he had never helped her.

He had to get back to the world

of men if for no other reason than to make amends to his wife and heal her soul of the bitter distortions that had made her life a hell.

It could be done. And then he thought for the first time of the institute's ban on Synthesis. Vixen and the staff had defied the ban!

Frustration boiled into fury, and he rose and clenched his fists in the face of the burning sun. He cursed his prison and damned the intolerable error that had been the mason of its stout walls. But he continued to stand—helpless.

He watched the sun revealing the city of dreadful ugliness. Structures of four different centuries stood side by side, and scarcely a single one revealed a line of imagination or beauty. The city was barren and full of discord to the senses. He hated it—and longed to re-enter it.

But the longing was becoming dim, even as the prolonged fast had diminished hunger. He felt a curious freedom from all that the city represented, and that itself was warning, he thought, of the deteriorating facilities of his mind.

It had been a futile dream to suppose that the human mind could be rebuilt by a machine. A hundred had been sacrificed to that dream, and he was the last. After him there would be no more.

In their common prison the hundred would be a living monument to the futility of his dream.

But it wasn't a common prison, he kept reminding himself. If it only were—!

He lifted his head sharply at the impact of new thought. For an instant the scene before him seemed suddenly shining and glorious beyond his power to behold. What if it *were* a common prison!

He dredged into his mind, stood aside, and examined his own thought processes. He recalled his utterance to Vixen, the utterance to which Vixen had responded as if it were sheer gibberish.

He recalled the exact words he had spoken then. And they *were* words—he let them flow through his mind over and over again. They were discrete symbols for exact thought processes. They constituted a language, a real and infinitely precise language, a language given by the semantic selector as it oriented the prepunched molecules that formed his brain.

It was the same language spoken by the Synthesized patients, which he had once called gibberish.

He was never aware of starting to run, only of being actually in flight down the long hillside as if in some fleeting panic. But he knew where he was going.

He was going to find a human being with whom he could speak.

III.

Marianne Carter had been a brilliant young selector technician in David's laboratory. Her brain had been virtually destroyed by electric shock.

Marianne's parents in desperate

hope had asked David for help, but he had not helped them. He had given them back their daughter alive, but only as a bewildered, gibbering creature who neither spoke sense nor comprehended anything that was said to her.

She had been his last patient, and she was now the closest. By the roundabout way through the city's outskirts, which was the only route David dared travel, she was fully ten miles away.

She was located at one of the small, public sanatoriums that had long ago replaced the gray prison houses once used for the mentally sick. David knew the place well. Others of his patients had been cared for there at times but Marianne was the only one there now.

It was well beyond noon when he finally arrived at the rear of the grounds surrounding the place. Through the heavy shrubbery that hid it he could see the faint, pink glow of the barrier field that fenced the grounds. Beyond, numerous patients were out on the lawn. If luck were with him, he might be able to see Marianne. Like some fantastic peeping Tom, he thought, a deep and desperate urge within him would be satisfied by a single glimpse of her and a word that he could understand.

He crouched down, watching first one side of the big grounds and then the other. Increasingly aware of the weakness and hunger that was returning, he knew that it was not long that he could wait.

And it was futile, he repeated. In the end he would have to give up and submit to hospitalization—and imprisonment. But first he had to see Marianne. He had to know about the language.

The afternoon dimmed and took on the quality of night. He watched the patients herded to the buildings by the attendants. There was as yet no sign of Marianne.

He shifted his cramped position, knowing he had come as far as he could go yet unwilling to cross that final pass between this meager freedom and the captivity he must face.

As he moved slightly he became aware for the first time of the two men who crouched a little way beyond him on the other side of the shrubs and right next to the barrier fence. He had no idea how long they had been there. They hunched beside a small wire hoop that one of them held against the fence.

With instinctive caution, David retreated to his former immobile crouch. In a moment he saw a figure moving swiftly across the lawn beyond. A woman's skirt fluttered wildly with her running in the half darkness. She ducked down as she neared the barrier. On hands and knees she crawled forward and through.

He sucked in his breath with sharp intake as she appeared through the hoop that the men held. There was no power on Earth that was known to be capable of breaking through that barrier field—until now.

Then she stood up and he saw her

face in full view. It was Marianne.

He must have made a movement and a sound. The two men turned and saw him. Almost in the same instant they were upon him. For a brief moment he fought back, but their fury was merciless, and his physical weakness gave them quick and easy victory.

They held him upright between them and stared in perplexity as if debating his fate in their own minds. David shook his head, his senses foggy from the beating, and felt the blood flowing from a cut lip. Then he saw Marianne standing before him. As his eyes met hers, her face flooded with startled recognition.

"David Mantell! Dr. Mantell—!"

Now it was his attackers who were startled. They loosed their grasp and backed in awe. He heard them exclaim beneath their breaths—his name.

It took a moment to realize that he had heard Marianne's words for what they were, that he had recognized his own name. In consecutive order he marveled at his understanding of the men's words.

And then he was close to crying with the sheer joy of a human voice that he understood. He managed a smile with his bloody lips.

"Hello, Marianne."

"You are one of us!" she breathed.

"I have a Synthesized brain," he said. "I escaped the laboratory to avoid imprisonment in a place like this." He waved a hand towards the

building. "I couldn't talk—"

"I know. All of us nearly went crazy at first."

"What does this mean? Your coming through the fence, and these . . . friends . . . of yours? Who are they?"

"Don't you remember? This is John Gray. He was your first patient. And this is Martin Everett."

The first man held out his hand and took David's warmly. He was a thin-faced, sensitive man, the artist of whom David had been thinking that very morning.

"We're terribly sorry," said John Gray. "We couldn't risk detection. We've planned too long to chance a failure now."

"I remember . . . five years ago—" said David.

He remembered faintly the name of Martin Everett, too. A spaceport engineer, he had been browned with the sun of several planets, but now he was pale from long confinement.

"Tell me what have you done? What do you know of our condition? What do you plan?"

"There's no time for that," said Martin urgently. "We've got to get away from here. We'll explain later, in our quarters."

The other two nodded and David found himself being hurried along between them, his consent being taken for granted. They had parked a large car on the road beyond the shrubbery and no one said anything more as they climbed in. He was too full of wonderment to do anything

more than observe.

In the car Marianne attempted to wipe the blood from his face. His gratitude for that simple attention was beyond all consideration of the act itself. It was a symbol that he was back in the fraternity of mankind. Each of them would be kinder to other men all the days of their lives because they had seen the dark, lonely walls of hell.

The four rode with little comment, but from each to all the others there seemed a mingling of spirit, almost as if they were become of common substance.

Marianne was a small, light-haired girl. Sitting beside him she reminded David of Alice when Alice was young and sweet and unambittered. But Marianne had the clarity of mind that Alice had never known.

The two men in front, the engineer and the artist, seemed aged far more than the gap of years since he had last seen them would account for. They were different men, of stature and humanity. In contrast he thought of the hordes among whom he had walked the previous night searching for a nameless something. Here it was, he thought. In the profile of these men—and in Marianne—was the thing he had sought, the lost and forgotten image of himself.

In all of them was strange newness that he could not name or define. It was the same new strength he had felt in the first moments of awakening, but it had been overshadowed and strangled in the dark-

ness of that loneliness during those first hours? Now it was back and he began to examine it for what it was.

They drove to a dilapidated house in the oldest section of town. Cautiously alert for followers, they stopped at the rear, and all of them got out.

The interior of the house was more pleasant than the outside. It had the atmosphere of an apartment where a couple of highly civilized men had lived for a long time.

Before she allowed him to question or be questioned, Marianne took David into the bathroom to finish the repairs to his face, and into the kitchen where she prepared a soup for him.

She sat at the opposite end of the table and watched as he ate. He was aware of her presence like a warming radiance. When he looked up abruptly she smiled at him, her deep brown eyes alive with *human* qualities, but, as if she read in his eyes that he was reminded of other things, she did not speak.

How many long, cold years had it been since he had sat thus in communion with Alice, he thought. Which of them had been the first to break the spell? Fault was in them both, but he was willing to assume all blame if the healing powers of Synthesis could answer his yearning for her.

Finished with the light meal, he allowed Marianne to lead him to the living room where John and Martin were waiting expectantly.

"For us this is unexpected luck

to have you with us," said John. "For you it may not be the tragedy you have believed if some of the things we have figured out are correct. We hope we can look to you for the advice we have long needed and an explanation of just what has happened to us."

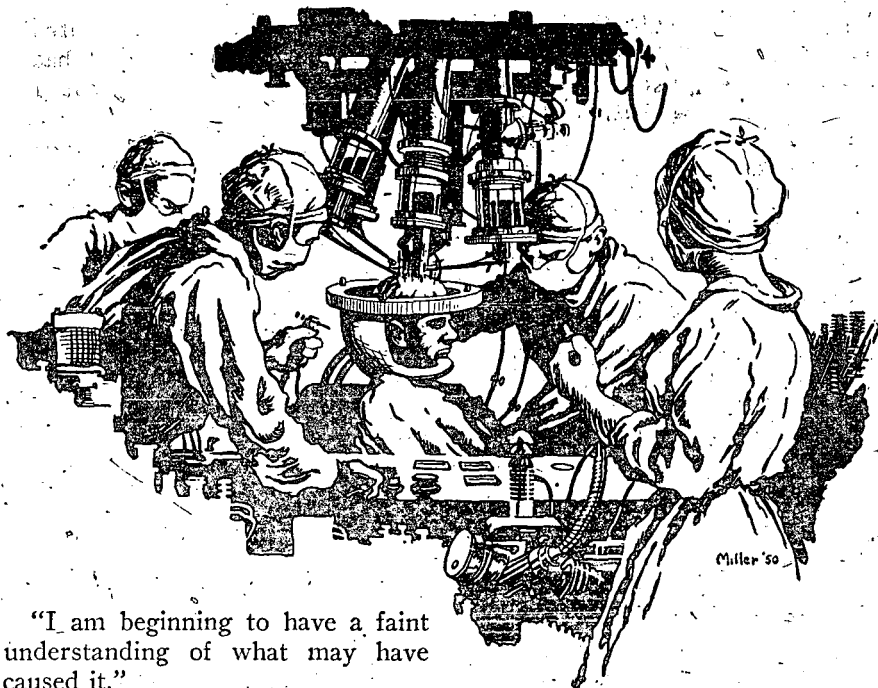
"I am afraid you know more than I," said David. "What have you done?"

"Little more than getting together and communicating with each other. Martin and I were in the same sanatorium cell, and we discovered we could talk to each other. Through the shop they provided for occupational therapy we succeeded in devising a gadget to pass through the fences. We took it easy at first because we wanted to find out what had happened to cut us off from everyone else. We still don't know, but we have concluded it's not wholly bad.

"We gradually contacted most of the others, about seventy-five so far, and then planned to escape permanently, as a group. This is the beginning, and now you have come along. What would you advise?"

"I don't know. You'll have to wait for an answer to that."

He sat down before the group and faced them. He spoke again slowly. "It has only been hours since I believed that I was utterly alone and incapable of communication with any other person in the world. I don't need to tell you about that hell. Each of you has been in it longer than I.



"I am beginning to have a faint understanding of what may have caused it."

"We thought at first that it might have been deliberate," said Martin. "We thought it might have been given during Synthesis to replace other faculties that couldn't be used. But that didn't make sense in the light of what was done to us afterwards, locking us up."

David shook his head. "It was not deliberate—not on our part at least. I think it was entirely accidental in the sense of being unforeseen, but that does not imply a failure of the process. Rather, I think it has worked entirely too well!"

"It would not be the first time that a semantic mechanism has gone on its own and turned up surprising results. You may recall Jamieson's ex-

periences when he first devised a semantic selector and it turned out Scott's 'History of Mankind'. Historians are still trying to show that it is a true forecast of the future, but for some reason he would never reveal during his lifetime Jamieson was positive that it would never happen as the book related. He said the chances of it were mathematically zero and let it go at that."

"After I knew that I possessed a language common to the Synthesized," said Marianne, "it seemed to me that its only possible origin was in the semantic selector."

"You're leaving us behind," said John. "We don't know much about those particular things."

"The Mantell Synthesis," said David, "consists of replacing the library of the brain, but of equal importance are the two halves of the process. Information is restored in punched card form, which in this case consists of punched molecules.

"Duplication of the basic cell structure, the complex cortical processes, and establishing metabolic reactions—these things have been done by biochemists for half a century in an effort to create an artificial thinking brain. But none of their efforts succeeded because they had no data mechanism and stubbornly refused to recognize it in spite of the antiquity of Von Foerster's work on punched molecules.

"Synthesis builds up these molecular files in previously prepared basic cell structures. Blank molecules are first created chemically. Then they are 'punched' with data from giant pattern molecules which have been prepared from a number of sources. That is old, too. At least as early as the twentieth century the principle of molecular molding was suspected.

"The chief data source is the brains of associates of the patient. Electroencephalographic data was taken first from my wife's brain, then from about thirty others. This covered a vast sector of my life. Then data was poured in from all the trivia and impedimenta that could be discovered to have ever been in my possession. All these carried connotations and implications far beyond the bare artifact.

"Lastly, book data were poured in. Thousands of tomes that I had read and thousands more that I hadn't. All of this added up to a pretty complete mass of information that came very close to duplicating what had been in my brain before the accident."

"That was the first half of the process, but in that state a brain is like a great library that has just been moved to new quarters, in which the truckers have dumped the books and file cards in a hopeless jumble in the middle of the floor. A brain that regained consciousness in such a condition would be in a state of lethal insanity. The body would die within minutes from the confusion of impulses."

"I begin to see where the semantic selector comes in," said Martin. "That's the librarian."

"Right. The earliest work in direct line with selector development was the mathematical theory of communication developed by Shannon in the twentieth century. It flowered in the discovery of the Law of Random by Jamieson and his subsequent invention of the semantic selector. Marianne can tell you what the selector does. She's spent five years as nursemaid to them."

The girl smiled. "No Jamieson selector ever did what the Mantell Synthesis demands. The old ones were mere toys that could take random combinations of a few items, several hundred thousand up to a couple of million, and arrange them in order, rejecting all semantic noise

and nonsense. But Synthesis demands that this be done for a set of items numbering around 1021."

"Surely a man in a whole lifetime doesn't accumulate that many items of data," exclaimed John.

"No—but he could. The wastage of the human brain has been explored for centuries, and I wonder if we haven't stumbled onto the answer to it right here.

"The learning process we all go through is a clumsy mess at best. Unable to cope with the world in childhood, we acquire tens of thousands of erroneous learning sets, which are seldom corrected in later life. They remain all our lives cross-indexed with masses of reasonably correct data. When the brain is asked for a certain response it fumbles around through these incorrect sets and brings them up about as often as the correct ones to which they are cross-indexed."

"That explains it!" Marianne cried in sudden excitement. "That's what's happened! The selector has sorted out and done away with every one of those semantically erroneous learning sets. We've got the same data with a modern filing system."

David smiled at her almost childish excitement, but he felt the same superb confidence that bubbled out in her.

"I think you're quite right," he said. "I was working up to it by a slower approach. The learning of a child is a hodgepodge of accumulating experiences—like the delivery of

books dumped on a library floor. These are carelessly filed and cross-indexed by emotion, a poor, inefficient librarian who hates her job but bitterly resents the rightful attempts of reason to take it over and put emotion in her own place as head, say, of the art department. Emotion is a selfish old spinster who wants the whole job and glory and makes a mess of all of it."

"Are we then cold and rational beings wholly without feeling?" said Martin in dismay. "Surely that is as bad as what we once were!"

"Is that the way you feel?"

"No—I think I feel an emotional sensitivity as great as I ever did."

"Probably greater. With emotion in her own place she is much more effective than when she was in charge of the files, which she messed up so badly.

"The semantic selector, in arranging the pre-punched molecules in precise order with semantically correct cross-indexing, has swept clean the crazy, nonsensical filing system accumulated over the years. Learning has been speeded up because there are prepared vast numbers of bank molecules that can efficiently receive new data now. The ties that required us to evaluate present data on the basis of early experiences are gone.

"The greatest evolutionary deficiency of the human brain is lack of a built-in semantic selector system. Some selection must go on it is true, but from an evolutionary standpoint the selector must be as

primitive as the brain of a worm.

"The Law of Random is a perplexing thing that men have never fathomed," he went on quietly. "We know it exists and we have fashioned semantic selectors to abide by it, but we have never seen the heights or the depths of it.

"Evolution appears to follow the Law, but in a smooth and flowing curve along which mutations themselves are part of a continuous process.

"We have jumped the curve entirely. We are a discontinuity. If we understood more than a fragment of the Law of Random, we could determine if we are an error that is to be erased or if we are the beginnings of a new and higher curve. Perhaps in a sufficiently large scale of time the whole curve is naturally discontinuous. We'll never live long enough—the race may not—to know the answer empirically. Some day we might solve it epistemologically.

"Without any way of knowing we may as well assume that we won't have to wait for the mutations of evolution. We have within our hands the means to make a new kind of man, one which can displace the old and bring reason into the world.

"Neurosis and psychosis have been driven beyond reach of us forever. I am very certain we are the most completely sane people the world has ever known!"

IV.

The two men blinked sharply as if

DISCONTINUITY

stung by a quick shock. Marianne gasped a little at the appalling nakedness of his claim. But none of them spoke to deny it.

As if it were the suddenly perceived answer to a long and intricate problem upon which he had spent his whole life, David felt the delicate pleasure of discovery. It was the logical goal achieved after a lifetime of wandering amid faint clues and whispered rumors. He felt as if he were standing upon a high peak beholding a vast and beautiful sea which he had always known would be there.

But his companions were not with him in spirit. They were not ready to behold such vastness without terror.

"How can we ever be sure of what we have lost?" said Marianne. She was sitting in a contracted position, hugging her arms close to her as if sudden cold had pervaded the room.

"We are not what we once were. You say we have emotion, but is it anything more than the recorded emotion of a symphony which can be stamped out by the thousands? Are we anything more than the products of a machine and, therefore, machines ourselves? Where is individuality, personality if the soul of man is no more than a collection of figurate molecules?"

"You have answered your own question," he said kindly. "You are afraid and I am not. If a single molecule among all the billions that have been recreated in your brain is dif-

ferent from those in mine then we are not identical.

"There is individuality enough for the most rugged of rebels against the herd. As for personality, that has certainly been changed, but little of value has been lost. Fear-born hate is certainly gone. In its place there is understanding of the motives of men. Greed is no longer in you because you can evaluate your own worth.

"Yet the intensity of your laughter, your capacity for sorrow, and your intellectual interests are specifically your own and different from any other man's. Every brain upon the whole Earth could pass beneath the selector, but no man would emerge the duplicate of any one of us."

"I cannot comprehend it," said John. "I have spent my life building symbols of my own emotional responses in order to convey those responses to others. But I—"

He stopped short. David smiled. "Keep going. You can't deny the logic of your own train of thought. Perhaps this is the key you need: No one else in the whole world could have painted the same pictures you have made."

A great peace seemed to flow over the artist. He settled back in the chair, his face calm as if a great turbulence within him had suddenly calmed.

"That's what you did," he said, "you took my pictures and out of *them* you obtained data to punch the molecules that now make up the only

brain in the world that could direct the painting of those pictures—mine."

"That is it. And still you might fear that much is lost, but it is not. A single hour's contact with another brain leaves enough imprint of our personality that it would suffice for fifty percent reproduction. No Synthesis has been performed with the assistance of less than twenty such persons who have known the patient for long periods.

"True, Synthesis could not exist without these recordings we have made upon other brains. Though it has not yet been done I believe that a one hundred percent restoration could be made with adequate assistance and no one could tell the difference in the Synthesized individual except for the increased efficiency of mind. Nothing essential would be lost."

"But the language—" said Martin. "You have not explained yet the advantages or even the full reason for this substitution of a wholly artificial language for the one we knew."

"I can name one advantage very quickly," said David. "How long do you suppose our conversation has taken so far?"

"About fifteen or twenty minutes."

"I've been noting Marianne's watch since I sat down. That was just thirty-eight seconds ago."

Marianne jerked her arm up as if she could confirm the statement with a glance. Then slowly, disbelief

faded and they realized how incredibly short a time their discussion had taken.

"Shannon introduced the factor of entropy into his formulations," said David. "His work has scarcely been improved upon since his day."

"As the organization of a communication system increases so that there is minimum freedom of choice, increased certainly, and minimum noise of both semantic and engineering kinds—as these things approach the ideal the entropy of the system approaches zero. I suggest that the communication systems of our brains have been reduced to virtually zero entropy by the selector.

"As a result, there is zero redundancy also—there is absolutely no part of a message between us which could be omitted and leave possible a correct translation. Likewise, any possible sound that we can make has a single, definite, and completely understandable semantic significance. Ideas that once would have required minutes of speaking can be conveyed with a single sound of almost infinitely precise intonation. There is no possible misunderstanding on the part of the hearer whose communication faculties likewise have been ordered by the semantic selector.

"For this reason we have found it impossible to understand those about us in any form of communication—speech, reading, sign language. All are beyond our comprehension because, as Shannon demonstrated so long ago, a channel cannot pass a message of greater entropy than the

channel capacity without equivocation. Since we demand zero entropy and ordinary communication employs so much higher values, we understand nothing."

Martin spoke up. "How well we know! In the hospital John and I beat our brains trying to work up a code system with the attendants and doctors. They did nothing but stare and grin as if we were cute monkeys cutting capers."

"Consider what it would mean as a universal language," said David. "Never has it been possible for one man to know another's thoughts with hundred percent certainty. Now it can be done. The new language makes possible unity of thought and action that has scarcely been dreamed of. What it would do to the advertisers, the politicians, and all those who thrive by breeding misunderstanding between men!"

"How can we remain in our present isolation?" exclaimed John. "What can we *do*? There are only the hundred of us. Is there no possibility of our ever breaking through?"

David looked carefully at each of them. The sharpness of his perceptions made the very presence of the others a thing of exquisite pleasure. But this was only an oasis where the drink of companionship with his own kind could be tasted for a short time. Dawn was coming with its necessities that would break the perfection of this hour.

They could not exist in this isolated world within a world.

"Suppose it were possible," said David thoughtfully, "to increase the entropy of our brains somewhat, deliberately introducing the necessary disorganization that would permit communication with the world, retaining if possible the present speech channels so that we could translate from one to the other."

"From what you said previously such a thing sounded impossible," said Martin.

"It may be. As long as the present semantic entropy *approaches* zero without actually achieving it, however, the selector might be able to fix it for us. It's a gamble, but I'm willing to try. Yet I couldn't be the first."

He saw the change come upon their faces now. They, who a moment ago were terrified at the vastness of the world which they had entered with him, now shrank before the implications of his words.

"We can't go *back*!" cried Marianne. "Not after this—I have dim memories of a period of terrible confusion and uncertainty, pain and misunderstanding, a period worse than the first days after the Synthesis."

"Such residual impressions are possible," said David. "I am appalled by the ugliness of what I see in the city about us, and the stupidity it signifies. Those I saw on the streets seemed to have shrunk to moronic stature. Have any of you checked your I.Q.?"

"How could we without stand-

ards?" said Martin.

"That's why it did not seem very astounding that you could penetrate the barrier field around the hospital with a baling wire gadget made in the therapy shop—when it has been mathematically proven the field cannot be penetrated."

"Why . . . we'd never thought of it. It seemed a simple problem."

"I'd say your I.Q.—and that of all of us—has gone up by one to two hundred points at least."

"Supermen, huh?" John smiled.

"No!" Marianne exclaimed seriously. "That's an ugly word that puts us above and beyond humanity. We are not that. We are part of it. We are the first *normal* men. We are the first of what all men could and should be. Anything less is illness of the normal man. We have been healed of that universal illness."

"That's a better definition," said David. "Every man who is born with adequate biochemical proportions is potentially a noble creature. We are the first of our kind to be put in the way to achieve our potentialities."

"Yet—we must give it up. To a degree, at least—if we are to re-enter the world we have left. Of that I am certain."

"Suppose we do? What then?"

"There is a far broader field for Synthesis than gross physical injuries. Reorientation by the selector should be made available to every man. It could banish neurosis and psychosis from the Earth—if it were permitted."

"There would hardly be opposition to that," said John.

"Perhaps. But Synthesis is now illegal because of the failures it has produced so far. I have long worked on borrowed time."

"But we've got to restore contact! How can it be done?"

"I'll take one of you with me for increase of entropy. That one can be an interpreter so that Dr. Vixen can take care of me. Then we will see what happens to the opposition."

"Who do you want?"

Each of them was looking at him now with eyes of dread. Though it possessed its own private hell of isolation from humanity, this was a paradise they regretted leaving.

"Let's draw names," said David.

It was Marianne.

V.

It was the night following when they drove into the darkened grounds of the Institute. A few random lights showed in laboratories in some of the buildings, but the Synthesis building was dark.

As the car drew to a halt the four of them left it and fanned out like silent, skillful thieves. David applied the combination to gain entrance through the main door, but they had to slug a watchman who surprised them. He greeted David with recognition and a friendly smile. They couldn't take the risk.

Inside, David hurried Marianne through the dark hallways and past the great banks of the selector equip-

ment that was silent now like a herd of sleeping giants. John and Martin followed at a short distance.

David turned on the lights as they entered the operating chamber. Marianne shrank in momentary hesitation as she saw the operating table before her.

David tried to smile reassuringly, but he understood her fear. "You don't have to go through with it," he said.

"Yes . . . I do. But you don't know what I'll be like when I get up from there, do you?"

"No. I don't know for sure."

While she changed to the operating robe he set the matrix of the semantic selector to widen the communication channels of her mind. Then he helped her to the table so that she lay with her face in a cradle that permitted access to anaesthetic and oxygen. Seconds later she was unconscious.

He picked up the electrode helmet from its sterilizing case and poised it over her head. At that moment he saw the shadowy figure standing in the dark depths between two panels of selector control equipment.

With a single uttered sound he commanded John and Martin. They circled unseen and collared the watcher with sudden speed that was seemingly more than human.

It was Vixen they brought out half suspended between them, his eyes wide with terror.

"I need his help if he'll give it," said David, "but if he thinks we're insane and is part of a trap to catch

us he can't give it."

"Shall we tie him up to be safe?"

"Wait. Let his arms go. But be ready to grab him again."

David held the helmet in his hands, its hundred spiny probes a terrible weapon to hurl into a man's face if he had to do it.

Cautiously, he held it out as if to Vixen, and then lowered it over the head of Marianne. Vixen advanced slowly towards the table, his eyes flashing from one to the other of the men at his side. Then he reached for the helmet and touched the adjustments with gentle skill.

They worked together swiftly then, no sound passing between any of them. By electroencephalograph they positioned the helmet with exacting care. Carefully, the hundred or more probes, scarcely a dozen molecules in thickness; were screwed down, penetrating the skull and into precise loci of the brain structure of Marianne.

It was exhausting labor. Time after time the probes had to be withdrawn when they fell short of correct placement by a few cell diameters. David was grateful for the presence of Vixen and prayed that his friend would have faith enough in him to go through with it with all the skill at his command, but he knew he could not be certain yet of Vixen's motives.

He finished the last probe. Vixen was perspiring, but they did not pause. He cut in the switches that let the impulses begin pouring through the giant, overhead cable

that connected with the helmet, upsetting the perfection that had previously been created within the mind of Marianne.

It seemed a grim and ugly thing to do, yet it must be done to all of them if they were to survive, he thought. Such a tiny minority could not exist behind the barrier that rose between them and all the rest of the world. If the process were successful, they could then bridge both worlds and invite the rest of mankind to share their fortune.

For two hours the selector mechanism shifted and surged and poured its disturbing pulses through the brain of Marianne. David did not know how long it would take for completion and he worried for her safety and the possible discovery of all of them.

Halfway from midnight to dawn the great mechanism chucked to a halt and the flow of symbols ceased. Tediously, the probes were withdrawn, and Vixen lent a needed hand again not knowing if he had helped perform a miracle or been accessory to murder.

They revived Marianne as quickly as possible. David remembered his awakening to loneliness and wondered if Marianne would know again a forsaken desolation, having crossed back over the barrier.

But even so, he was not prepared for her reaction. She sat up slowly and looked about with wild expectancy in her eyes. Then her face filled with understanding and a gasp of horror came from her throat—a

single long scream of despair.

"Marianne!" David rushed to comfort her in his arms, but he could not still the violent shaking of her body.

They let her cry, and in time she quieted as if some psychic storm had swept her. She looked up at them finally with the quietness of desolation.

"How have we lived like beasts all our lives?"

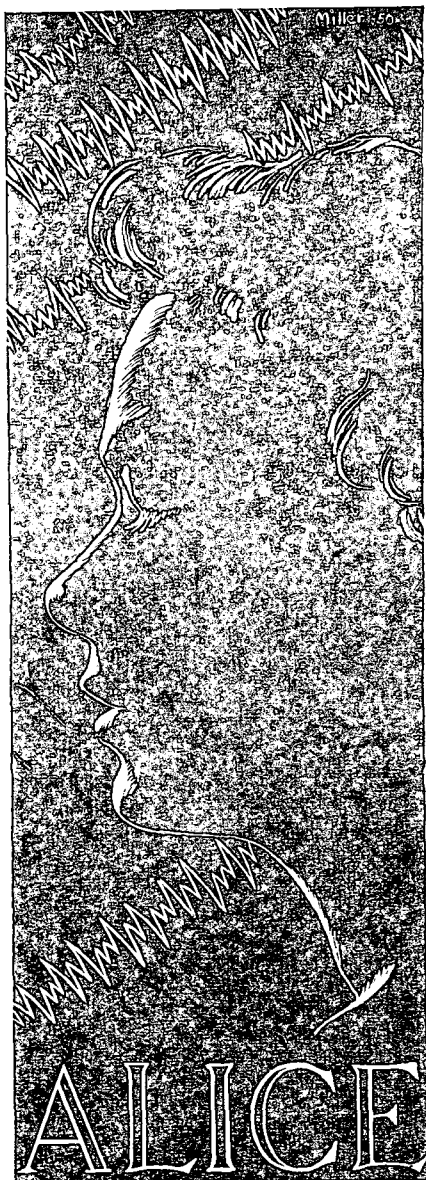
"Do you recall the language, Marianne? Can you speak with Dr. Vixen?"

She nodded absently and spoke a phrase uncomprehended by David and his two companions. But Dr. Vixen's face lighted with relief and joy. It seemed an endless conversation then upon which they embarked.

When she turned again to David her voice was flat and the joy of life seemed to have gone from her. "We can understand. He says he has waited here for you each night believing you would come back. He did not believe you were insane. The workers here have kept the secret of your escape so that no one knew of it. You were not pursued.

"I have explained a little of what we have done, but I can hardly get through the high semantic noise level. I want to think in Synthesized terms while speaking in English. Let's go back to our isolation. I feel I can't endure this chaos of thought."

"You are more sensitive than before," said David. "You are on a bridge between paradise and hell. In



either one, with no knowledge of the other, you could be content. Understanding both is a special hell of its own. Those whose entropy is never reduced to the low levels we know will not experience it.

"But I'm coming to join you. Ask Vixen if he'll stay and follow through with the same treatment for me."

"He has already agreed."

David awoke to nightmare. The chaos was like some great machine gone wrong, every part working against all others yet inexplicably still moving. Chaotic sounds, shrill and wild, rang in his ears and ten thousand unbidden visions marched before his eyes.

He remembered Marianne's cry of despair and understood it fully. He was aware of her by his side clutching his hand tightly in both of hers.

"It gets better after a little while," she murmured.

"I hope so." He managed a grin. "It's pretty bad at first, isn't it?"

Vixen was there, anxiously. "Are you all right, David? Can you understand me now? Can you tell me what went wrong?"

David had the continued impression of birdlike fluttering. He wondered if all men would seem to be of such reduced stature as Vixen—and knew it was so.

"I'm all right," he said. "Order breakfast for all of us sent to my office, and we'll determine what needs to be done next."

Dr. Dodge, President of the Institute of Bio-Sciences, was a small, pudgy man. His thick hands could scarcely manipulate a scalpel or the focusing dials of a microscope. That was a major reason why he was a research executive instead of a practicing scientist, David thought.

David had heard all of the doctor's weary arguments. They had been over the same ground again and again in the past months—but he had not had Marianne on previous visits. Dodge had not yet learned that David himself was a Synthesized.

"I want to present Marianne Carter," David said. "She is the first direct proof of the success of the Mantell Synthesis. The most recent case, she required eighty percent replacement and is willing to submit to any test required to demonstrate the success of Synthesis."

Dodge glanced at Marianne somewhat as if she were a specimen under glass. He pursed his lips in displeasure, then turned angry eyes towards David.

"Have you disobeyed the memorandum I issued to your department? This girl was as much a failure as the rest! If you have experimented further, you have disobeyed my order."

"She is proof of the success of Synthesis."

"After my order was given!"

"Is that important in the face of success?"

"Extremely important." He patted a stack of documents on his

desk. "Here are the accumulated protests that have come from every humanitarian society in the country. Every public affairs observer has broadcast disapproval of your continued experiments with human beings. Now we have a threat in Congress to stop the flow of funds while a long investigation of the entire Institute is conducted. You have threatened the very existence of our organization!

"I have pacified the opposition by publication of my memorandum which I issued your laboratory. If I should now announce a resumption of Synthesis they'd have my hide. If I uttered the very word in public, our funds would be dried up."

"Are we to be dictated to and be directed in our research by news propagandists and politicians?"

"We are to serve the public interest," said Dodge as if he spoke an infallible maxim. "We exist by public acclaim and to serve those who support us."

"All right. Let's give them proof that Synthesis can rebuild a human mind. Let me show Marianne to the whole world."

Dodge glanced at her distastefully. "Eighty percent replacement. Who could ever be sure if he were speaking with a human being or a mechanical robot? I have never favored your attempts to reclaim the dead, and I will not support your fantasies now in the face of the threat you have brought to the Institute.

"No. Your refusal to obey orders shows you are unfit to direct the tre-

mendous facilities of the laboratory intrusted to you. From this moment they are closed to you. You are dismissed. You may have time to remove your personal effects. Your further appearance will constitute illegal trespass."

"That's not fair!" cried Marianne. "What of the others like me? What is to become of them?"

"There will be no more tampering with those poor specimens of humanity. They will be permitted to live out their lives in adequate custody, but we want no more like them."

David was about to speak in reckless fury now, but Marianne stopped him with a single sharp word in their new tongue, which Dodge scarcely noticed, thinking it only an exclamation.

But it conveyed to David all that he understood he should have perceived by himself. Dodge deluded even himself as to his real reasons for opposing Synthesis. He was a miserable little monarch, greedy and fearful of his empire. There was bitter hate for one such as David who had ranged so far beyond in the vast plains of research that the short-winded capacities of Dr. Dodge could scarcely keep him in sight.

It was the envy and hate of a little man for a big one. He would never attempt to understand, but he would wield all the power of his governmental authority to destroy that which he could not comprehend.

David rose. "We may return," he said, "with a better argument."

They returned to the laboratory. During their absence, John and Martin had been treated for increased entropy under Vixen's direction. They were in a state of despair.

With Vixen, the four of them met in David's office once again. David felt sorry for Vixen. Not only so seemingly incompetent in their midst, he was now a bewildered little man. It was as if they were simply taller than he and could look over a high wall into a garden that was hidden from his vision even as he talked with them.

"Dodge refused to remove the ban on the operation," said David. For Vixen's benefit he spoke in English.

"I don't understand your urgency," said Vixen slowly. "There is something new in all of you. It makes me afraid. Perhaps it made Dodge afraid, too. Tell me what it is that is different, and what it is that you are so urgent about. There is more involved than mere continuance of the Synthesis operations."

"Much more. It involves the whole race. We have in our hands the capacities for development that might have been learned or evolved in the next million years—if we hadn't killed ourselves off by then."

Swiftly, and in crude terms that Vixen could understand, David explained the thing that had happened to their brains through the manipulation of the semantic selector. "Any mind, then, can pass beneath the selector," he concluded, "and become ordered and rational just as ours

have done, and become aware of the new language as well as the old."

Vixen was staring at him and breathing heavily when David finished. "And you suppose that you can entice the whole world to change themselves over?" he demanded.

"The thousands in the mental hospitals will be our first opportunity," said David. "We'll take the most demented and raise them to heights of genius that cannot be imagined—or ignored. Who will be able to resist our offer then?"

"Ninety-nine percent of the population," said Vixen. "I would resist if I were one of them—"

"You!" David's voice was filled with sudden contempt, and then he recognized his error. Vixen was not the stupid creature he seemed. It was the Synthesized who had changed and Vixen was still in the intellectual vanguard of his race.

"Why?" David spoke more gently.

"I am fifty years old. I have a wife and children. I like things the way they are. I like myself the way I am, if you please. I am content. And I, who understand very well the inconsistency of our established interpretations of the laws of nature, am far more pliable than the mass of men. You will find few takers if you try to sell your new world literally as such."

"But *you will* join us?"

"I don't know. I really don't know, David. I'll have to think about it very much for a long time."

The four of them stood looking at him incredulously. It was no longer within their power to comprehend

the workings of neurons that could lead to such a response as his. It represented only illness.

Yet Dr. Vixen was an independent being with his own right to choose or reject—and so were the billions who were even less than he.

"You have not shown me this world which you see," Vixen went on as if trying to soften a blow whose impact he fully sensed. "You cannot show it, perhaps, but tell it only in words which you have said are feeble things to convey that which you have experienced.

"Perhaps you will find enough clients among the young and adventurous, but neither quality is strong in me any longer."

"How can a blind man be told the color of the sky?" asked Marianne. "How can a frightened child be made to understand what it's like to be free? Only by experience can it be known."

"You have a viewpoint we had not dreamed of," said David, "but one that we must consider."

In their new language he said, "Vixen may be right. In the end we may have to ram this down humanity's throat, but we can't even put the rest of the hundred incommunicable condition unless we change Dodge's mind. Tomorrow at the latest they'll be here with a dismantling order."

"How can we change Dodge except by force?" said Martin.

"We can't. You get Dodge here tonight," he said to John and Martin. "I'm going to get one other at the

same time—my wife, Alice."

Marianne gasped incredulously. "You don't want *her*!"

Watching, David saw her face crumple momentarily as she lost control. Then she murmured, "I'm sorry. I'm terribly sorry. Forgive me."

He understood how it must have seemed to her. They were the first to cross back over the bridge to contact with fellow humans. There had seemed for a time a companionship and a narrow unity between them. Of it she had fashioned a dream.

He touched her arm. "She's my wife, Marianne. I've loved her for a long time—loved and neglected and hurt her. I'm going to make it up. You've dreamed a lovely and a foolish thing. You could almost have been our daughter."

"That would have been something," she said almost bitterly.

He smiled with tenderness and lifted her chin. At least no one need fear that Synthesis would make the race an emotionally sterile group of creatures intent only on intellectual forms of tick-tack-toe.

"Please, Marianne. I'm going to need your help."

"Of course. Forgive me."

His own house looked strange to him as if he had been gone a very long time and had forgotten the details of its lines. Yet he remembered well the last night he had been here, the night that Alice plotted murder.

He could see lights and hoped she was alone. He was not prepared for murder, but the urge would be great

if Exter were there.

She was alone. He let himself in quietly and was suddenly before her in the same living room they had shared for so many long and empty years.

She uttered a scream that he thought would never die. White faced, she cowered in the depths of the sofa on which she sat.

"David! Don't come nearer—leave me alone! Vixen promised . . . I gave you back your life!"

"I'm not going to hurt you, Alice. Please don't be afraid, and don't try to explain. Listen to what I have to say."

She watched his approach as if hypnotized in terror by a creeping cobra. He sat down and put his arm along the back of the sofa, but she shrank from it.

"Something very wonderful has come out of this thing that has happened to us. We have learned how to control Synthesis, how to reorder the human mind so that life can be lived as it should be. The hates and fears can be cleaned out of our minds to make a fresh start in complete understanding and trust.

"You and I can make a fresh start. I want you to come to the laboratory with me and submit to the selector. Things can be again the way they were fifteen years ago—except better."

Her fear-wide eyes had not blinked once. "No . . . I won't let you do anything to me, David. You can't make me. Go away and let me alone!"

He tried to tell her again in other

words, and she remained hidden still behind her wall of terror. He felt suddenly very tired.

"Alice, you loved me once. I did nothing to let you know how much it meant to me or to make it grow. But, if I thought there was nothing left of it, I'd never have come back tonight. I love you and I want you back the way we were so long ago, and it can be that way. I'm telling you the truth, Alice."

"The day after we were married you disappeared into your laboratory, and I've scarcely seen you since."

It was then that he was sure, for her eyes became soft with the fleeting memory of a time beyond their troubled years.

"I'll make it up, every day of neglect. I promise you I will, darling."

He hit her then sharply and carefully on the point of the chin. She uttered a brief, low cry and sagged back against the sofa.

They had Dr. Dodge already in the operating room when he carried Alice's moaning, half-limp form into the laboratory.

Vixen helped them. His face was white and he moved like a man in a nightmare. He had gone too far now to do anything but go the whole way.

He needed sleep badly, but the rest of them seemed unaware that they were starting their second twenty-four hours without rest. Vixen watched David's sure hands, beside which his own were clumsy paws. David had always possessed great skill in the laboratory, but his fingers

seemed inspired now.

He was baffled and half angered by David's tenderness towards his wife. Vixen had known them over the years and had watched Alice grow from a vibrant, beautiful girl into a harsh, treacherous creature who could look upon murder.

Vixen tried to allow for the neglect that David had given her, but then he thought of his own wife. She had been patient. No, Alice would have been discarded as a worthless human by all but David who still saw in her the dreams he had held long ago.

For good or for evil, the Synthesis had produced a mighty upheaval in those upon whom it was performed.

With difficulty, Vixen performed the work of driving the probes into the brain of Dodge with precision. He would have enjoyed much more smashing that shining pate with a hammer, he thought. And his life would be no more forfeit than for what he was already doing. For assault and kidnapping they were already dead men.

He sat down when his work was through and watched David switch on the simultaneous channels of the selector that fed pulses to the brains of Dodge and of Alice. The room was silent and there was nothing to be done during the long hours ahead.

He must have slept, dozing in the uncomfortable chair by the wall. He was roused at last by the excited babbling of voices and recognized the speech of the Synthesized in their wild new tongue.

They were around the two tables, and the helmets and probes had been removed from the two figures. Dodge had been turned over and was struggling to sit up, his face suffused with the red blush of rage. He looked like a pudgy Buddha squatting on the table in the shapeless gown that covered him. Vixen felt a chill of dread.

But a slow change spread over the face of Dodge. He reminded Vixen suddenly of a man blind for many years who was seeing again the dawn. His face lighted, and he looked around.

After a moment, his head bowed, and he wept quietly.

David was not watching. He was beside Alice. She had not yet seen him, and Vixen could glimpse only the side of her face, but ugly lines of strain and dark intent seemed to have vanished. A quality of rightful youth had taken possession of her.

She turned then, and caught sight of David. Her arms went out to him, and he crushed her close to him. Vixen could see the tears rising in her eyes and spinning down her cheeks and heard her murmuring over and over, "My darling—"

Marianne sat beside Vixen, her face wistful but not bitter, and Vixen's eyes continued to shift from the face of Dodge to Alice and back.

"If *those* two could be changed," he whispered half to himself, "the whole world could be made over."

"I'm next. You'll let me be next?" he demanded urgently. "And after me, the whole world!"

THE END.

DISCONTINUITY

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THE ENCHANTED FOREST

BY FRITZ LEIBER

Elven was a scientist among a scientific people. But the Enchanted Forest was more than even his hard-headed training could stand. For time, or space, or something seemed bent in full-circle!

Illustrated by Miller

The darkness was fusty as Formalhautian Aa leaves, acrid as a Rigelian brush fire, and it still shook faintly, like one of the dancing houses of the Wild Ones. It was filled with a petulant, low humming, like nothing so much as a wounded Earth-wasp.

Machinery whirled limply,

briefly. An oval door opened in the darkness. Soft green light filtered in—and the unique scent, aromatic in this case yet with a grassy sourness, of a new planet.

The green was imparted to the light by the thorny boughs or creepers crisscrossing the doorway. To eyes dreary from deep sub-space the

oval of interlaced, wrist-thick tendrils was a throat-lumping sight.

A human hand moved delicately from the darkness toward the green barrier. The finger-long, translucent thorns quivered, curved back ever so slowly, then struck—a hairbreadth short, for the hand had stopped.

The hand did not withdraw, but lingered just in range, caressing danger. A sharp gay laugh etched itself against the woundedly-humming dark.

Have to dust those devilish little green daggers to get out of the wreck, Elven thought. *Lucky they were here though. The thorn forest's cushioning-effect may have been the straw that saved the spaceboat's back—or at least mine.*

Then Elven stiffened. The humming behind him shaped itself into faint English speech altered by centuries of slurring, but still essentially the same.

"You fly fast, Elven."

"Faster than any of your hunters," Elven agreed softly without looking around, and added, "FTL"—meaning Faster Than Light.

"You fly far, Elven. Tens of light-years," the wounded voice continued.

"Scores," Elven corrected.

"Yet I speak to you, Elven."

"But you don't know where I am. I came on a blind reach through deep sub-space. And your FTL radio can take no fix. You are shouting at infinity, Fedris."

"And fly you ever so fast and far, Elven," the wounded voice per-

sisted, "you must finally go to ground, and then we will search you out."

Again Elven laughed gayly. His eyes were still on the green doorway. "You will search me out! Where will you search me out, Fedris? On which of the million planets of the *sos*? On which of the hundred million planets not of the *sos*?"

The wounded voice grew weaker. "Your home planet is dead, Elven. Of all the Wild Ones, only you slipped through our cordon."

This time Elven did not comment vocally. He felt at his throat and carefully took from a gleaming locket there a tiny white sphere no bigger than a lady beetle. Holding it treasuringly in his cupped palm, he studied it with a brooding mockery. Then, still handling it as if it were an awesome object, he replaced it in the locket.

The wounded voice had sunk to a ghostly whisper.

"You are alone, Elven. Alone with the mystery and terror of the universe. The unknown will find you, Elven, even before we do. Time and space and fate will all conspire against you. Chance itself will—"

The spectral FTL-radio voice died as the residual power in the wrecked machinery exhausted itself utterly. Silence filled the broken gut of the spaceboat.

Silence that was gayly shattered when Elven laughed a last time. Fedris the Psychologist! Fedris the Fool! Did Fedris think to sap his nerve with witch-doctor threats and

the power of suggestion? As if a man—or woman—of the Wild Ones could ever be brought to believe in the supernatural!

Not that there wasn't an unearthliness loose in the universe, Elven reminded himself somberly—an unearthly beauty born of danger and ultimate self-expression. But only the Wild Ones knew *that* unearthliness. It could never be known to the poor tame hordes of the sos, who would always revere safety and timidity as most members of the human sos—or society—have revered them—and hate all lovers of beauty and danger.

Just as they had hated the Wild Ones and so destroyed them.

All save one.

One, had Fedris said? Elven smiled cryptically, touched the locket at his neck, and leaped lightly to his feet.

A short time later he had what he needed from the wreck.

"And now, Fedris," he murmured, "I have a work of creation to perform." He smiled. "Or should I say recreation?"

He directed at the green doorway the blunt muzzle of a dustgun. There was no sound or flash, but the green boughs shook, blackened—the thorns vanishing—and turned to a drifting powder fine and dark as the ashes carpeting Earth's Moon. Elven sprang to the doorway and for a moment he was poised there, yellow-haired, cool-lipped, laughing-eyed, handsome as a young god—or adolescent devil—in his black tunic em-

broidered with platinum. Then he leaned out and directed the dustgun's ultrasonic downward until he had cleared a patch of ground in the thorn forest. When this moment's work was over, he dropped lightly down, the fine dust puffing up to his knees at the impact.

Elven snapped off his dustgun, flirited sweat from his face, laughed at his growing exasperation, and looked around at the thorn forest. It had not changed an iota in the miles he'd made. Just the glassy thorns and the lance-shaped leaves and the boughs rising from the bare, reddish earth. Not another planet to be seen. Nor had he caught the tiniest glimpse of moving life, large or small—save the thorns themselves, which "noticed" him whenever he came too close. As an experiment he'd let a baby one prick him and it had stung abominably.

Such an environment! What did it suggest, anyhow? Cultivation? Or a plant that permeated its environs with poison, as Earth's redwood its woody body. He grinned at the chill that flashed along his spine.

And, if there were no animal life, what the devil were the thorns for?

A ridiculous forest! In its simplicity suggesting the enchanted forests of ancient Earthly fairy tales. That idea should please witch doctor Fedris!

If only he had some notion of the general location of the planet he was on, he might be able to make better guesses about its other life forms.

Life spores did drift about in space, so that solar systems and even star regions tended to have biological similarities. But he'd come too fast and too curiously, too fast even to see stars, in the Wild Ones' fastest and most curious boat, to know where he was.

Or for Fedris to know where he was, he reminded himself.

Or for any deep-space approach-warning system, if there were one on this planet, to have spotted his arrival. For that matter he hadn't foreseen his arrival himself. There had been just the dip up from sub-space, the sinister black confetti of the meteorite swarm, the collision, the wrecked spaceboat's desperate fall, clutching at the nearest planet.

He should be able to judge his location when night came and he could see the stars. That is, if night ever came on this planet. Or if that high fog ever dispersed.

He consulted his compass. The needle of the primitive but useful instrument held true. At least this planet had magnetic poles.

And it probably had night and day, to support vegetable life and such a balmy temperature.

Once he got out of this forest, he'd be able to plan. Just give him cities! One city!

He tucked the compass in his tunic, patting the locket at his neck in a strangely affectionate, almost reverent way.

He looked at the laced boughs ahead. Yes, it was exactly like those fairy forests that cost fairy-book

knights so much hackwork with their two-handed swords.

Easier with a dustgun—and he had scores of miles of cleared path in his store of ultrasonic refills.

He glanced back at the slightly curving tunnel he'd made.

Through the slaty ashes on its floor, wicked green shoots were already rising.

He snapped on the duster.

The boughs were so thick at its edge that the clearing took Elven by surprise. One moment he was watching a tangled green mat blacken under the duster's invisible beam. The next, he had stepped out—not into fairyland, but into the sort of place where fairy tales were first told.

The clearing was about a half mile in diameter. Round it the thorn forest made a circle. A little stream bubbled out of the poisonous greenery a hundred paces to his right and crossed the clearing through a shallow valley. Beyond the stream rose a small hill.

On the hillside was a ragged cluster of gray buildings. From one of them rose a pencil of smoke. Outside were a couple of carts and some primitive agricultural implements.

Save for the space occupied by the buildings, the valley was under intensive cultivation. The hill was planted at regular intervals with small trees bearing clusters of red and yellow fruit. Elsewhere were rows of bushy plants and fields of

grain rippling in the breeze. All vegetation, however, seemed to stop about a yard from the thorn forest.

There was a mournful lowing. Around the hillside came a half dozen cattle. A man in a plain tunic was leisurely driving them toward the buildings. A tiny animal, perhaps a cat, came out of the building with the smoke and walked with the cattle, rubbing against their legs. A young woman came to the door after the cat and stood watching with folded arms.

Elven drank in the atmosphere of peace and rich earth, feeling like a man in an ancient room. Such idyllic scenes as this must have been Earth's in olden times. He felt his taut muscles relaxing.

A second young woman stepped out of a copse of trees just ahead and stood facing him, wide-eyed. She was dressed in a greenish tunic of softened, spun, and woven vegetable fibers. Elven sensed in her a certain charm, half sophisticated, half primitive. She was like one of the girls of the Wild Ones in a rustic play suit. But her face was that of an awestruck child.

He walked toward her through the rustling grain. She dropped to her knees.

"You . . . you—" she murmured with difficulty. Then, more swiftly, in perfect English speech, "Do not harm me, lord. Accept my reverence."

"I will not harm you, if you answer my questions well," Elven replied, accepting the advantage in

status he seemed to have been given.

"What place is this?"

"It is the Place," she replied simply.

"Yes, but what place?"

"It is the Place," she repeated quakingly. "There are no others."

"Then where did I come from?" he asked.

Her eyes widened a little with terror. "I do not know." She was red-haired and really quite beautiful.

Elven frowned. "What planet is this?"

She looked at him doubtfully. "What is planet?"

Perhaps there were going to be language difficulties after all, Elven thought. "What sun?" he asked.

"What is sun?"

He pointed upward impatiently. "Doesn't that stuff ever go away?"

"You mean," she faltered fearfully, "does the sky ever go away?"

"The sky is always the same?"

"Sometimes it brightens. Now comes night."

"How far to the end of the thorn forest?"

"I do not understand." Then her gaze slipped beyond him, to the ragged doorway made by his duster. Her look of awe was intensified, became touched with horror. "You have conquered the poison needles," she whispered. Then she abased herself until her loose, red hair touched the russet shoots of the grain. "Do not hurt me, all-powerful one," she gasped.

"I cannot promise that," Elven told her curtly. "What is your

name?"

"Sefora," she whispered.

"Very well, Sefora. Lead me to your people."

She sprang up and fled like a doe back to the farm buildings.

When Elven reached the roof from which the smoke rose, taking the leisurely pace befitting his dignity as god or overlord or whatever the girl had taken him for, the welcoming committee had already formed. Two young men bent their knees to him, and the young woman he had seen standing at the doorway held out to him a platter of orange and purple fruit. The Conqueror of the Poison Needles sampled this refreshment, then waved it aside with a curt nod of approval, although he found it delicious.

When he entered the rude farmhouse he was met by a blushing Sefora who carried cloths and a steaming bowl. She timidly indicated his boots. He showed her the trick of the fastenings and in a few moments he was sprawled on a couch of hides stuffed with aromatic leaves, while she reverently washed his feet.

She was about twenty, he discovered talking to her idly, not worrying about important information for the moment. Her life was one of farm work and rustic play. One of the young men—Alfors—had recently become her mate.

Outside the gray sky was swiftly darkening. The other young man, whom Elven had first seen driving the cattle and who answered to the

name of Kors, now brought armfuls of knotty wood, which he fed to the meager fire, so that it crackled up in rich yellows and reds. While Tulya—Kors' girl—busied herself nearby with work that involved mouth-watering odors.

The atmosphere was homey, though somewhat stiff. After all, Elven reminded himself, one doesn't have a god to dinner every night. But after a meal of meat stew, fresh-baked bread, fruit preserves, and a thin wine, he smiled his approval and the atmosphere quickly became more celebratory, in fact quite gay. Alfors took a harp strung with gut and sang simple praises of nature, while later Sefora and Tulya danced. Kors kept the fire roaring and Elven's wine cup full, though once he disappeared for some time, evidently to care for the animals.

Elven brightened. These rustic folk faintly resembled his own Wild Ones. They seemed to have a touch of that reckless, ecstatic spirit so hated by the tame folk of the sos. (Though after a while the resemblance grew too painfully strong, and with an imperious gesture he moderated their gaiety.)

Meanwhile, by observation and question, he was swiftly learning, though what he learned was astonishing rather than helpful. These four young people were the sole inhabitants of their community. They knew nothing of any culture other than their own.

They had never seen the sun or the stars. Evidently this was a

planet whose axes of rotation and of revolution around its sun were the same, so that the climate was always unvarying at each latitude, the present locality being under a cloud belt. Later he might check this, he told himself, by determining if the days and nights were always of equal length.

Strangest of all, the two couples had never been beyond the clearing. The thorn forest, which they conceived of as extending to infinity, was a barrier beyond their power to break. Fires, they told him, sizzled out against it. It swiftly dulled their sharpest axes. And they had a healthy awe of its diabolically sentient thorns.

All this suggested an obvious line of questioning.

"Where are your parents?" Elven asked Kors.

"Parents?" Kors' brow wrinkled.

"You mean the shining ones?"

Tulya broke in. She looked sad. "They are gone."

"Shining ones?" Elven quizzed. "People like yourselves?"

"Oh no. Beings of metal with wheels for feet and long, clever arms that bent anywhere."

"I have always wished I were made of lovely, bright metal," Sefora commented wistfully, "with heels instead of ugly feet, and a sweet voice that never changed, and a mind that knew everything and never lost its temper."

Tulya continued, "They told us when they went why they must go. So that we could live by our own

powers alone, as all beings should. But we loved them and have always been sorry."

There was no getting away from it, Elven decided after making some casual use of his special mind-searching powers to test the veracity of their answers. These four people had actually been reared by robots of some sort. But why? A dozen fantastic, unprovable possibilities occurred to him. He remembered what Fedris had said about the mystery of the universe, and smiled wryly.

Then it was his turn to answer questions, hesitant and awestricken ones. He replied simply, "I am a black angel from above. When God created his universe he decided it would be a pretty dull place if there weren't a few souls in it willing to take all risks and dare all dangers. So here and there among his infinite flocks of tame angels, sparingly, he introduced a wild strain, so that there would always be a few souls who would kick up their heels and jump any fences. Yes, and break the fences down too, exposing the tame flocks to night with its unknown beauties and dangers." He smiled around impishly, the firelight making odd highlights on his lips and cheeks. "Just as I've broken down your thorn fence."

It had been pitch black outside for some time. The wine jar was almost empty. Elven yawned. Immediately preparations were made for his rest. The cat got up from the hearth and came and rubbed Elven's legs.

The first pale glow of dawn aroused Elven and he slipped out of bed so quietly that he wakened no one, not even the cat. For a moment he hesitated in the gray room heavy with the smell of embers and the lees of wine. It occurred to him that it would be rather pleasant to live out his life here as a sylvan god adored by nymphs and rustics.

But then his hand touched his throat and he shook his head. This was no place for him to accomplish his mission—for one thing, there weren't enough people. He needed cities. With a last look at his blanket-huddled hostesses and hosts—Sefora's hair had just begun to turn ruddy in the increasing light—he went out.

As he had expected, the thorn forest had long ago repaired the break he had made near the stream. He turned in the opposite direction and skirted the hill until he reached the green wall beyond. There, consulting his compass, he set his course away from the wrecked spaceboat. Then he began to dust.

By early afternoon—judging time from the changing intensity of the light—he had made a dozen miles and was thinking that perhaps he should have stayed at the wreck long enough to try to patch up a levitator. If only he could get up a hundred feet to see what—if anything—was going to happen to this ridiculous forest!

For it still fronted him unchangingly, like some wizard growth from a book of fairy tales. The glassy

thorns still curved back and struck whenever he swayed too close. And behind him the green shoots still pushed up through the slaty powder.

He thought, what a transition—from ultraphotonic flight in a spaceboat, to this worm's-crawl. Enough to bore a Wild One to desperation, to make him think twice of the simple delights of a life spent as a sylvan god.

But then he unfastened the locket at his throat and took out the tiny white sphere. His smile became an inspired one as he gazed at it gleaming on his palm.

Only one of the Wild Ones had escaped from their beleaguered planet, Fedris had said.

What did Fedris know!

He knew that before Elven reached his spaceboat, he had escaped in disguise through the tremendous cordons of the sos. That in the course of that escape he had twice been searched so thoroughly that it would have been a miracle if he could have concealed more than this one tiny tablet.

But this one tiny tablet was enough.

In it were all the Wild Ones.

Early humans had often been fascinated by the idea of an invisible man. Yet it hadn't occurred to them that the invisible man has always existed, that each one of us begins as an invisible man—the single cell from which each human grows.

Here in this white tablet were the genetic elements of all the Wild Ones, the chromosomes and genes of

each individual. Here were fire-eyed Vlna, swashbuckling Nar, soft-laughing Forten—they, and a billion others! The identical twins of each last person destroyed with the planet of the Wild Ones, waiting only encasement in suitable denucleated growth cells and nurture in some suitable mother. All rolling about prettily in Elven's palm:

So much for the physical inheritance.

And as for the social inheritance, there was Elven:

Then it could all begin again. Once more the Wild Ones could dream their cosmos-storming dreams and face their beautiful dangers. Once more they could seek to create, if they chose, those giant atoms, seeds of new universes, because of which the sos had destroyed them. Back in the Dawn Age physicists had envisioned the single giant atom from which the whole universe had grown, and now it was time to see if more such atoms could be created from energy drawn from sub-space. And who were Fedris and Elven and the sos to say whether or not the new universes might—or should—destroy the old? What matter how the tame herds feared those beautiful, sub-microscopic eggs of creation?

It *must* all begin again, Elven resolved.

Yet it was as much the feel of the thorn shoots rising under his feet, as his mighty resolve, that drove him on.

An hour later his duster disintegrated a tangle of boughs that had

only sky behind it. He stepped into a clearing a half mile in diameter. Just ahead a bubbling stream went through a little valley, where russet grain rippled. Beyond the valley was a small, orchard-covered hill. On its hither side, low gray buildings clustered raggedly. From one rose a thread of smoke. A man came around the hill, driving cattle.

Elven's second thought was that something must have gone wrong with his compass, some force must have been deflecting it steadily, to draw him back in a circle.

His first thought, which he had repressed quickly, had been that here was the mystery Fedris had promised him, something supernatural from the ancient fairy-book world.

And as if time too had been drawn back in a circle—he repressed this notion even more quickly—he saw Sefora standing by the familiar copse of trees just ahead.

Elven called her name and hurried toward her, a little surprised at his pleasure in seeing her again.

She saw him, brought up her hand and swiftly tossed something to him. He started to catch it against his chest, thinking it a gleaming fruit.

He jerked aside barely in time.

It was a gleaming and wickedly heavy-bladed knife.

"Sefora!" he shouted.

The red-haired nymph turned and fled like a doe, screaming, "Alfors! Kors! Tulya!" Elven raced after her.

It was just beyond the first out-



building that he ran into the ambush, which seemed to have been organized impromptu in an ancient carpenter's shop. Alfors and Kors came roaring at him from the barn, the one swinging a heavy mallet, the other a long saw. While from the kitchen door, nearer by, Tulya rushed with a cleaver.

Elven caught her wrist and the two of them reeled with the force of her swing. Reluctantly then—hating his action and only obeying necessity—he snatched out his duster for a snap-shot at the nearest of the others.

Kors staggered, lifted his hand to his eyes and brushed away dust.

Now Alfors was the closest. Elven could see the inch-long teeth on the twanging, singing saw-blade. Then its gleaming lower length dissolved along with Alfors' hand, while its upper half went screeching past his head.

Kors came on, screaming in pain, swinging the mallet blindly. Elven sent him sprawling with a full-intensity shot that made his chest a small volcano of dust, swung round and cut down Alfors, ducked just in time as the cleaver, transferred to Tulya's other hand, swiped at his neck. They went down together in a heap, the duster at Tulya's throat.

Brushing the fine gray ashes fran-

tically from his face, Elven looked up to see Sefora racing toward him. Her flaming hair and livid face were preceded by the three gleaming tines of a pitchfork.

"Sefora!" he cried and tried to get up, but Alfors had fallen across his legs. "Sefora!" he cried again imploringly, but she didn't seem to hear him and her face looked only hate, so he snapped on the duster, and tines and face and hair went up in a gray cloud. Her headless body pitched across him with a curious little vault as the blunted pitchfork buried its end in the ground. She hit and rolled over twice. Then everything was very still, until a cow lowed restlessly.

Elven dragged himself from under what remained of Alfors and stood up shakily. He coughed a little, then with a somewhat horrified distaste raced out of the settling gray cloud. As soon as he was in clean air he emptied his lungs several times, shuddered a bit, smiled ruefully at the four motionless forms on which the dust was settling, and set himself to figure things out.

Evidently some magnetic force had deflected his compass needle, causing him to travel in a circle. Perhaps one of the magnetic poles of this planet was in the immediate locality. Of course this was no ordinary polar climate or day-night cycle, still there was no reason why a planet's axes of magnetism and rotation mightn't be far removed from each other.

The behavior of his last evening's hosts and hostesses was a knottier

problem. It seemed incredible that his mere disappearance, even granting they thought him a god, had offended them so that they had become murderous. Ancient Earth-peoples had killed gods and god-symbols, of course, yet that had been a matter of deliberate ritual, not sudden blood-frenzy.

For a moment he found himself wondering if Fedris had somehow poisoned their minds against him, if Fedris possessed some FTL agency that had rendered the whole universe allergic to Elven. But that, he knew, was the merest morbid fancy, a kind of soured humor.

Perhaps his charming rustics had been subject to some kind of cyclic insanity.

He shrugged, then resolutely went into the house and prepared himself a meal. By the time it was ready the sky had darkened. He built a big fire and put in some time constructing out of materials in his pack, a small gyrocompass. He worked with an absent-minded mastery, as one whittles a toy for a child. He noticed the cat watching him from the doorway, but it fled whenever he called to it, and it refused to be lured by the food he set on the hearth. He looked up at the wine jars dangling from the rafters, but did not reach them down.

After a while he disposed himself on the couch Kors and Tulya had occupied the night before. The room grew dim as the fire died down. He succeeded in keeping his thoughts away from what lay outside, except

that once or twice his mind pictured the odd little vault Sefora's body had made in pitching over him. In the doorway the cat's eyes gleamed.

When he woke it was full day. He quickly got his things together, adding a little fruit to his pack. The cat shot aside as he went out the door. He did not look at the scene of yesterday's battle. He could hear flies buzzing there. He went over the hill to where he had entered the thorn forest last morning. The thorn trees, with their ridiculous fairy-book persistence, had long ago repaired the opening he'd made. There was no sign of it. He turned on the tiny motor of the gyrocompass, leveled his gun at the green wall, and started dusting.

It was as monotonous a work as ever, but he went about it with a new and almost unsmiling grinness. At regular intervals he consulted the gyrocompass and sighted back carefully along the arrow-straight, shoot-green corridor that narrowed with more than perspective. Odd, the speed with which those thorns grew!

In his mind he rehearsed his long-range course of action. He could count, he must hope, on a generation's freedom from Fedris and the forces of the sos. In that time he must find a large culture, preferably urban, or one with a large number of the right sort of domestic animals, and make himself absolute master of it, probably by establishing a new religion. Then the proper facilities

for breeding must be arranged. Next the seeds of the Wild Ones pelleted in the locket at his throat must be separated—as many as there were facilities for—and placed in their living or nonliving mothers. Probably living. And probably not human—that might present too many sociological difficulties.

It amused him to think of the Wild Ones reborn from sheep or goats, or perhaps some wholly alien rooter or browser, and his mind conjured up a diverting picture of himself leading his strange flocks over hilly pastures, piping like ancient Pan—until he realized that his mind had pictured Sefora and Tulya dancing along beside him, and he snapped off the mental picture with a frown.

Then would come the matter of the rearing and education of the Wild Ones. His hypothetical community of underlings would take care of the former, the latter must all proceed from his own brain—supplemented by the library of educational micro-tapes in the wrecked space-boat. Robots of some sort would be an absolute necessity. He remembered the conversation of the night before last, which had indicated that there were or had been robots on this planet, and lost himself in tenuous speculation—though not forgetting his gyrocompass observations.

So the day wore on for Elven, walking hour after hour behind a dustgun into a dustcloud, until he was almost hypnotized in spite of his self-watchfulness and a host of disquieting memories fitfully thronged

his mind: the darkness of sub-space; the cat's eyes at the doorway, the gleam of its fur against his ankle; dust flowing from Tulya's throat; the little vault Sefora's body had given in pitching over him, almost as if it rode an invisible wave in the air; an imaginary vision of the blasted planet of the Wild Ones, its dark side aglow with radioactives visible even in deep space; the wasplike humming in the wrecked spaceboat; Fedris' ghostly whisper, "The unknown will find you, Elven—"

The break in the thorn forest took him by surprise.

He stepped into a clearing half a mile in diameter. Just ahead a stream bubbled through a little valley rippling with russet grain. Beyond was a small, orchard-covered hill against whose side low, gray buildings clustered raggedly. From one rose a ribbon of smoke.

He hardly felt the thorns sting him as he backed into them, though the stimulus they provided was enough to send him forward again a few steps. But such trifles had no effect on the furious working of his mind. He must, he told himself, be up against a force that distorted a gyrocompass as much as a magnet, that even distorted the visual lines of space.

Or else he really was in a fairy-book world where no matter how hard you tried to escape through an enchanted forest, you were always led back at evening to—

He fancied he could see a black

cloud of flies hovering near the low gray buildings.

And then he heard a rustling in the copse of trees just ahead and heard a horribly familiar voice call excitedly, "Tulya! Come quickly!"

He began to shake. Then his hair-triggered muscles, obeying some random stimulus, hurled him forward aimlessly, jerked him to a stop as suddenly. Thigh-deep in the grain, he stared around wildly. Then his gaze fixed on a movement in the twilight grain—two trails of movement, shaking the grain but showing nothing more. Two trails of movement working their way from the copse to him.

And then suddenly Sefora and Tulya were upon him, springing from their concealment like mischievous children, their eyes gleaming, their mouths smiling with a wicked delight. Tulya's throat, that he had yesterday seen billow into dust, bulged with laughter. Sefora's red hair, that he had watched puff into a gray cloud, rippled in the breeze.

He tried to run back into the forest but they cut him off and caught him with gales of laughter. At the touch of their hands all strength went out of him; and it seemed to him that his bones were turning to an icy mush as they dragged him along stumblingly through the grain.

"We won't hurt you," Tulya assured him between peals of wicked laughter.

"Oh, Tulya, but he's shy!"

"Something's made him unhappy, Sefora."

"He needs loving, Tulya!" And Elven felt Sefora's cold arms go round his neck and her wet lips press his. Gasping, he tried to push away, and the lips bubbled more laughter. He closed his eyes tight and began to sob.

When next he opened them, he was standing near the gray buildings, and someone had put wreaths of flowers around his neck and smeared fruit on his chin, and Alfors and Kors had come, and all four of them were dancing around him wildly in the twilight, hand in hand, laughing, laughing.

Then Elven laughed too, louder and louder, and their gleaming eyes encouraged him, and he began to spin round and round inside their spinning circle, and they grimaced their joy at his comradeship. And then he raised his dustgun and snapped it on and kept on spinning until the circle of other laughers was only an expanding dust ring. Then, still laughing, he ran over the hill, a cat scampering in swift rushes at his side, until he came to a thorny wall. After his hands and face were puffing with stings, he remembered to lift something he'd been holding in his hand and touch a button on it. Then he marched into a dust cloud, singing.

All night he marched and sang, pausing only to reload the gun with a gleeful automatism, or to take from his pack another flashglobe of cold light, which revealed the small

world of green thorns and dust motes around him. Mostly he sang an old Centaurian *lieder* that went:

We'll fall through the stars, my Deborah,
We'll fall through the skeins of light,
We'll fall out of the Galaxy
And I'll kiss you again in the night.

Only sometimes he sang "Sefora" instead of "Deborah" and "kill" instead of "kiss." At times it seemed to him that he was followed by prancing goats and sheep and strange monsters that were really his brothers and sisters. And at other times there danced along beside him two nymphs, one red-haired. They sang with him in high sweet voices and smiled at him wickedly. Toward morning he grew tired and unstrapped the pack from his back and threw it away, and later he ripped something from his throat and threw that away, too.

As the sky paled through the boughs, the nymphs and beasts vanished and he remembered that he was someone dangerous and important, and that something quite impossible had truly happened to him, but that if he could really manage to think things through—

The thorn forest ended. He stepped into a clearing a half mile in diameter. Just ahead a stream gurgled through a small valley. Beyond was an orchard-covered hill. Russet grain rippled in the valley. On the hillside low gray buildings clustered raggedly. From one rose a thin streamer of smoke.

And toward him, striding lithely

through the grain, came Sefora.

Elven screamed horribly and pointed the dustgun. But the range was too great. Only a ribbon of grain stretching halfway to her went up in dust. She turned and raced toward the buildings. He followed her, gun still pointed and snapped on at full power, running furiously along the dust path, taking wild leaps through the gray clouds.

The dust path drew closer and closer to Sefora, until it almost lapped her heels. She darted between two buildings.

Then something tightened like a snake around Elven's knees, and as he pitched forward something else tightened around his upper body, jerking his elbows against his sides. The dustgun flew from his hand as he smashed against the ground.

Then he was lying on his back gasping, and through the thinning dust cloud Alfors and Kors were looking down at him as they wound their lassos tighter and tighter around him, trussing him up. He heard Alfors say, "Are you all right, Sefora?" and a voice reply, "Yes. Let me see him." And then Sefora's face appeared through the dust cloud and looked down into his with cold curiosity, and her red hair touched his cheek, and Elven closed his eyes and screamed many times.

"It was all very simple and there was, of course, absolutely nothing of the supernatural," the Director of Human Research assured Fedris, taking a sip of mellow Magellanic

wine from the cup at his elbow. "Elven merely walked in a straight line."

Fedris frowned. He was a small man with a worried look that the most thoroughgoing psychoanalyses had been unable to eradicate. "Of course the Galaxy is tremendously grateful to you for capturing Elven. We never dreamed he'd got as far as the Magellanics. Can't say what horrors we may have escaped—"

"I deserve no credit," the director told him. "It was all sheer accident, and the matter of Elven's nerve cracking. Of course you'd prepared the ground there by hinting to him that the supernatural might take a hand."

"That was the merest empty threat, born of desperation," Fedris interrupted, reddening a bit.

"Still, it prepared the ground. And then Elven had the devilish misfortune of landing right in the middle of our project on Magellanic 47. And that, I admit, might be enough to startle anyone." The director grinned.

Fedris looked up. "Just what is your project? All I know is that it's rather hush-hush."

The director settled back in his easy-chair. "The scientific understanding of human behavior has always presented extraordinary difficulties. Ever since the Dawn Age men have wanted to analyze their social problems in the same way they analyze the problems of physics and chemistry. They've wanted to know exactly what causes produce

exactly what results. But one great obstacle has always licked them."

Fedris nodded. "Lack of controls."

"Exactly," the director agreed. "With rats, say, it would be easy. You can have two—or a hundred—families of rats, each family with identical heredity, each in an identical environment. Then you can vary one factor in one family and watch the results. And when you get results you can trust them, because the other family is your control, showing what happens when you don't vary the factor."

Fedris looked at him wonderingly. "Do you mean to say—?"

The director nodded. "On Magellanic 47 we're carrying on that same sort of work, not with rats, but with human beings. The cages are half-mile clearings with identical weather, terrain, plants, animals—everything identical down to the tiniest detail. The bars of the cages are the thorn trees, which our botanists developed specially for the purpose. The inmates of the cages—the human experimental animals—are identical twins—though centuplets would be closer to the right word. Identical upbringings are assured for each group by the use of robot nurses and mentors, set to perform always the same unvarying routine. These robots are removed when the members of the group are sufficiently mature for our purposes. All our observations are, of course, completely secret—and also intermittent, which had the unfortunate result of letting

Elven do some serious damage before he was caught.

"Do you see the setup now? In the thorn forest in which Elven was wrecked there were approximately one hundred identical clearings set at identical intervals. Each clearing looked exactly like the other, and each contained one Sefora, one Tulya, one Alfors, and one Kors. Elven thought he was going in a circle, but actually he was going in a straight line. Each evening it was a different clearing he came to. Each night he met a new Sefora.

"Each group he encountered was identical except for one factor—the factor we were varying—and that had the effect of making it a bit more grisly for him. You see, in those groups we happened to be running an experiment to determine the causes of human behavior patterns toward strangers. We'd made slight variations in their environment and robot-education, with the result that the first group he met was submissive toward strangers; the second was violently hostile; the third as violently friendly; the fourth highly suspicious. Too bad he didn't meet the fourth group first—though, of course, they'd have been unable to manage him except that he was half mad with supernatural terror."

The director finished his wine and smiled at Fedris. "So you see it all *was* the sheerest accident. No one was more surprised than I when, in taking a routine observation, I found that my 'animals' had this gibbering and trussed-up intruder. And

you could have knocked me over with a molecule when I found out it was Elven."

Fedris whistled his wonder. "I can sympathize with the poor devil," he said; "and I can understand, too, why your project is hush-hush."

The director nodded. "Yes, experimenting with human beings is a rather hard notion for most people to take. Still it's better than running all mankind as one big experiment without controls. And we're extremely kind to our 'animals'. As soon as our experiment with each is finished, it's our policy to graduate

them, with suitable re-education, into the sos."

"Still—" said Fedris doubtfully.

"You think it's a bit like some of the ideas of the Wild Ones?"

"A bit," Fedris admitted.

"Sometimes I think so too," the director admitted with a smile, and poured his guest more wine.

While deep in the thorn forest on Magellanic 47, green shoots and tendrils closed round a locket containing a white tablet, encapsulating all the Wild Ones save Elven in a green and tiny tomb.

THE END

THE ANALYTICAL LABORATORY

The article "Destination Moon" in the July issue of the magazine found itself in a peculiar position, so far as reader reports went. For full evaluation, you had to see the movie! (It's worth while for any science-fictioneer, incidentally. It's a really fine piece of work, but they still need to develop a technique for photographing stars. Agreed it's a tough problem; nevertheless some solution must be found.) However, the story ratings this issue ran as follows:

July, 1950 Issue

Place	Story	Author	Points
1.	The Little Black Bag	C. M. Kornbluth	2.12
2.	Heir Apparent	Lawrence O'Donnell	2.75
3.	Exposure	Eric Frank Russell	3.15
4.	Private Enterprise	Edwin James	3.40
5.	Skin Deep	Ford McCormack	3.43

And I think that probably the last two should be called a tie for fourth place; the accuracy of the second decimal place is, I suspect, fictitious to a considerable extent in a sampling of the size we have—and considering the wide and wild variations of opinion. No story failed to get a first-place vote; none failed to get a fifth-place from some reader.

And, finally, to the several hundred readers who wrote the incautious Mr. Friedman, my understanding is he is not a philanthropic millionaire. I expect to hear from him in more detail when he recuperates.

THE EDITOR.

BOOK REVIEWS

"The Port Of Peril," by Otis Adelbert Kline. Grandon Company, Providence, R. I. 1949. 218 p. Ill. \$3.00

The late Otis Kline picked up the mantle of Edgar Rice Burroughs and improved on the latter's Martian adventure-fantasies with a swashbuckling Venusian series of his own. The first two of the "Peril" trilogy, "The Planet of Peril" and "The Prince of Peril," were published twenty years ago but did not quite overcome the Burroughs competition in their book versions. Now the sequel serialized as "Buccaneers of Venus," with the original J. Allen St. John illustrations — never improved upon for this type of story — carries on the adventures of Robert Grandon of Terra, and Harry Thorne, Zinlo of Olba, in a war to the death with the piratical Huit-senni and assorted monster-men. If you like the Burroughs sheer adventure formula, this is better Bur-

roughs than the creator of John Carter has done himself for a long time. Kline's equally good Mars tales are promised by a new publisher who has the same address as the late and ambitious Hadley Company.

P. Schuyler Miller

"Nineteen Eighty-four," by George Orwell. Harcourt, Brace & Company, New York. 1949. 314 p. \$3.00

No grimmer or more thoughtfully worked out picture of a society ridden by a power-hungry oligarchy has appeared in these pages than the one George Orwell shows us in his prevision of our own culture after thirty-five more years. Like H. G. Wells, he takes as his unheroic protagonist a man of no particular importance who is nevertheless close enough to the inner workings of the social machine to see a little way into the ugly tangle of its entrails, and to be caught up in its inexorable man-

gling of individual lives. Winston Smith is the kind of man most readers of Science Fiction would be in this world of 1984, far enough above the half-starved rabble of the proletariat to hold a place in the hopeless round of the Outer Party and intelligent enough to see farther below the surface than the Inner Party can safely permit.

This is the world state for which Nazism and Communism are the pilot plants, the test runs, the incubating vats—openly and hopelessly dedicated to the perpetual maintenance of the Inner Party at any expense, and to the jamming down of the rest of the populace to a level where the slightest stirring of protest is not only physically impossible but literally unthinkable. The three Party slogans: WAR IS PEACE, FREEDOM IS SLAVERY, IGNORANCE IS STRENGTH, make a hideous kind of sense to those who have gone through the horror of Room 101 and achieved the salving relief of doublethink. The Ministry of Truth, Smith's employer—Minitru in Newspeak, the language which will have no words but those which parrot the current Party line—controls the thoughts of the people; Smith's own job is the "correcting" of historic records so that the Party's omniscience and omnipotence, past and present, can never be questioned. Miniplenty controls the starvling economy; Minipax makes perpetual war against one or another of the rival world states,

Eurasia and Eastasia. Miniluv, most dreaded of all, is the agency of the Thought Police who keep incessant watch over every Party member through the universal telescreens.

Oceania, Smith's homeland, is a mosaic of the British commonwealth of nations and the Americas; Eurasia has grown from Soviet Russia and its satellites; Eastasia has a Chinese core. But for accidents of color and language, life in any of them would be the same. The endless war which maintains an economy of scarcity and a state of perpetual hysteria may itself be a trick of the Party which can callously bomb its own people to maintain its position. Even Big Brother, all-seeing dictator of Oceania, may be a figment, for there is no source of information which is not Party-made.

Winston Smith's brief and inevitable career of error: his discovery of an uncorrected scrap of history, his spasm of love in a world where sex is being stamped out, his tentative venture at thinking for himself, his search for the ephemeral underground Brotherhood, and the end in the torture cells of Miniluv—these are the story of "Nineteen Eighty-four". The pattern is familiar here; the execution goes beyond the limits of popular magazine fiction. The book is in the tradition of "Erewhon" and "Gulliver's Travels," but it is a bitter warning of what may come out of the seed which we see sown all around us, in the hysterical witch-hunt against free-

dom in science, in the purges of textbooks which question the *status quo*, in the condemnation by association which is sanctioned in the highest government circles. Double think, the ability to believe implicitly utterly contradictory statements, and its ultimate expression in the gabble of duck speak, are already with us. And it is only thirty-five years until 1984.

P. Schuyler Miller

"Earth Abides," by George R. Stewart.
Random House, New York. 1949.
373 p. \$3.00

If the present upsurge of public interest in science fiction is to last and to grow, writers and publishers must find ways of bridging the considerable gulf between the traditions of general fiction and those which have developed within the science-fiction field. That bridge will probably be made by books like Orwell's recent "Nineteen Eighty-four" and George R. Stewart's "Earth Abides".

Mr. Stewart is best known for his striking and original novels "Storm" and "Fire," and perhaps to some science fictionists for his less successful "Man." These are a kind of science fiction, in that they are developed around the scientific phenomena connected with natural crises. He himself has pointed out that his interest is in emergencies in the relationship of man with his environment, and his new novel, "Earth Abides," bears out this analysis. Seen in this light, Mr.

Stewart is writing fiction which grows out of a young and little understood science, the science of ecology.

In brief, "Earth Abides" is the story of a segment of mankind in the half century after a plague has swept the world and left man again a rare animal, parasitic on the gradually decaying remains of his material civilization. Its hero is a bookish young man, Isherwood Williams, who dies as Ish, the patriarch and demigod of the little tribe he has formed of survivors in the San Francisco area. Quietly, without melodrama and with very few peaks of violence such as seem necessary in most popular fiction, Mr. Stewart shows us the old culture wasting and thinning and a new one taking form, as man adjusts to his new relationship with his changed environment.

As in the author's other books, the intricacy of detail with which he has worked out his problem in ecology is fascinating. The way in which vestiges of the old life carry on, shaping the new-food taken from the vast stores of canned goods instead of from new crops and new herds—cars used for transportation instead of horses, while gas and tires last—electric power lingering for months and years while the automatic dynamos run and transmission lines withstand storm and rot—water a little longer in some places—the counter-plagues of rats, of ants, and of cattle—these things are carefully reasoned out of intimate knowledge

of man and his works.

Science fiction magazines have often depicted this situation, but never so reasonably or so well as this. "Men go and come," *Ecclesiastes* tell us, "but earth abides." Civilization goes and comes, George R. Stewart adds, but man abides.

P. Schuyler Miller

"Theory and Design of Electron Beams," by J. R. Pierce. Van Nostrand. 197 p. \$3.50

It is something of a rarity for the columns of *Astounding* to carry a review of a strictly technical book. To account for this one, it is necessary to let the reader in on one of the worst kept secrets of the sf world. This secret—and don't breathe a word of this to any one—is that J. R. Pierce is none other than J. J. Coupling whom the readers of *Astounding* know so well for his lucid articles on science and for his all too infrequent stories. It should cause no surprise, then, to hear that Dr. Pierce has a brilliant record in electronics research. He is the author of many scientific papers and has to his credit well over fifty patents on electronic devices.

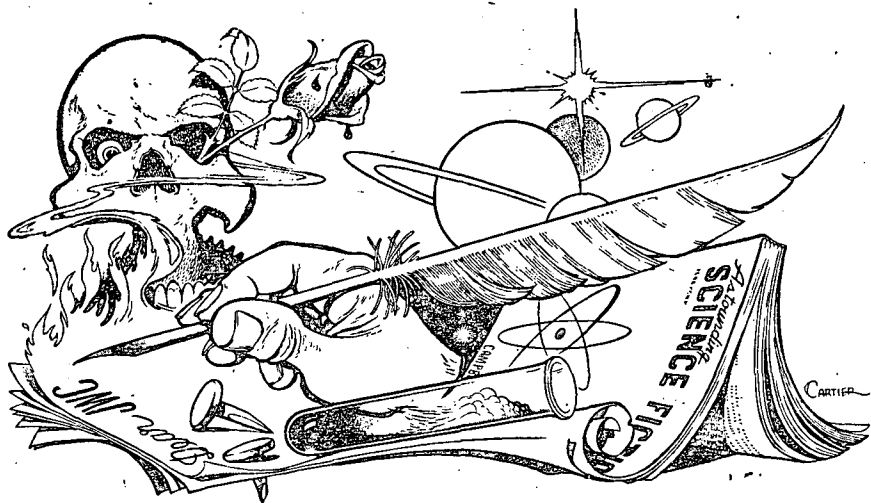
The subject of electron beams may be thought of as belonging to the general domain of electron optics. However, the subject has in the past been treated by people whose main interest was in the electron microscope and television image tubes. When one comes to devices such as the traveling wave tubes for micro-

waves, the material in standard texts on electron optics is not directly helpful. Since the quality of performance that can be expected of a microwave oscillator or amplifier is basically dependent on how well the electron beam has been designed, the technical importance of the present book is obvious.

Lack of space forbids us from giving here more than a brief summary of the contents of the book. The first three chapters contain an excellent review of the physics of electron motion in electric and magnetic fields of relatively low frequencies. This material should be of interest to any one concerned with advanced physics as it is very well put together. The next four chapters contain a discussion of the optics of electron beams. The final four chapters go into detailed design considerations such as the effect of thermal velocities with which the electrons leave the cathode, the effect of space charge on beam characteristics, the design of electron guns and finally, some sound philosophy on what a designer of electronic devices should keep in mind as he goes about his job.

While the book makes full use of mathematics, it is free from the pedantry that often characterizes mathematical treatment of physical subjects. In fact, the whole treatment, mathematical and physical, is characterized by elegance and lucidity. But then, no less was to be expected of J. J. Cou . . . sorry, I mean J. R. Pierce.

E. L. Locke



BRASS TACKS

Dear Mr. Campbell:

We had thought that our mental telepathy was working fine, except for a few bad ones, but we'll put it on paper, if you'd rather. We have been talking over two years' issues of *Astounding* and these are the things we remember. (The "we" is not an editorial one. My husband and I, by putting together some of our qualifications and throwing away others, equal one of your typical readers.)

"Dianetics," of course, will last as a top article. I don't know whether that is because of your personal enthusiasm or not, but we've sent for the book. The "Aphrodite Project" was exciting; we wished it were authentic. Could be, sometime. Bill

likes your article about computers; they're over my head. I like the Wilmer Shiras stories; the problem is with us, even without mutants. In my work I spend half an hour a day with some adolescents three years or more retarded in reading. No one spends half an hour with a similar group three years or more advanced.

We give top story rating to "The Players of A." In scope, in care of detail, in the semantics in the chapter headings, it was a fine thing. None of his shorter pieces sound like the same author.

Peter Phillips and L. Sprague de Camp are our favorite comedians, although we like Hippocrates and admire humor wherever we find it. We like stories in which the author

sets up conditions and stays inside them, like "The Needle," "Private Eye," and "Unite and Conquer," to mention only a few. We quote from Asimov's "No Connection" and Macfarlane's "To Watch the Watchers." We liked the ideas behind "A Minority Report," "Trojan Horse Laugh," "Late Night Final," and "Eternity Lost." Intergalactic wars or invasions as such are getting a little worn, but a new idea, or a new viewpoint, like "Not to be Opened" is very welcome.

Your issues are uneven, as you no doubt know, making the Analytical Lab useless for comparing one month with another; but what else can you do? We are glad you are free to arrange things as you see fit.

Well, is there anything we don't like? Yes, stories that fall apart in the last installment and start telling two or three other stories instead of finishing the one they started. Examples: "Seetee Shock," "Gulf," and "The Queen of Zamba," although, of course, the last-named one was a Lewis Carrollian type yarn and didn't have to be logical.

Authors? Anderson is a good writer, but he never quite comes out on top with us. Clarke, Asimov, van Vogt, Hubbard, Russell, Sturgeon, Padgett, all belong on the cover. Some good new names coming up, too.

Thank whoever is in charge of your covers, by the way. I can't say I care to leave the May one where my uninitiated friends can see it, but

usually there is dignity and aptness to the illustrations, and the format is excellent.

All in all, we are pleased that we have become subscribers, instead of taking our chances at the drugstores, as we've been doing for the last two years,—Edith J. Carr, R.F.D. # 1, Saco, Maine.

Thanks! That's just the kind of review I need!

Dear Mr. Campbell:

For several years I have delayed writing you about what I like to read in Astounding because I wasn't clear in my mind about the reasons. However, reading Katherine Mac Lean's "Incommunicado" in the June issue has helped clarify my ideas to the point where I think I can tell you.

"Incommunicado" typifies many of the things I like most in science fiction. The actions of the hero are presented practically without gaps so that identification with him is easy. He is presented with two problems—of integrating his own thinking and of the nature of communication—which seem to me intrinsically interesting. The story is told chiefly in terms of action. And, most important for my reading enjoyment, it is self-contained. That is, if any historical, economic, social, and scientific background not familiar to the reader is required for an under-

standing of the story, it is presented in the course of the action, not as paragraph after paragraph of explanation or "synopsis" of the developments of preceding ages. The details and local color are presented in an exceedingly concrete fashion so that participation in the action is easy for the reader. Permeating the story is an awareness of sensory stimuli as possible significant clues to what people are like. Also it's fun to find that an author has been struck by an experience I have had, such as hearing the IBM machines talking; but that's not necessary for me to enjoy the story. "Incommunicado," by my standards, is an optimum piece.

This leads me on to mention briefly what I do not enjoy particularly in science fiction. I do not enjoy serials which are so externally complicated that an extended history has to be presented by the author and memorized by the reader before the action has much meaning or so internally complicated that an appearance of depth of idea or motive depends chiefly on the fact that the reader is never quite sure what is happening to whom or with what. E. E. Smith and A. E. van Vogt seem to me most frequently to give us these masterpieces of over-complication; which is too bad, because I like the styles of both very much. My ideal of the magazine-type continued story is the series, in which each story is self-contained though adding to a general pattern. Asi-

mov's Robotics stories, Padgett's Baldies, Simak's Websters, de Camp's Viagens Interplanetarias group, and Hubbard's Ole Doc series are all much more satisfying to me than serialized chunks of "history" which lack enough dramatic action to hold my attention from issue to issue.

Any story illustrated by Cartier gains in interest for me even before I begin to read it. Work him hard!

I like humor in science fiction when it is intrinsic in the action. De Camp is certainly a master at this.

I like the editorials, which are often as full of ideas as any story and as stimulating to thinking as those stories with the effective truncated endings.

I have liked immensely Ley's articles on the atmosphere, an article a while back on genetics, any good pseudo-serious article—agreeing with my brother that "Progress Report" is one of the great things in the English language—any article on biology-related subjects. But don't cut out the ones on mechanics and physics—I have to learn sometime. I'd like ones on archeology—in addition to De Camp's—, on geology, on nutrition—of anything from elephants to Venus flytraps—, and as many on dianetics as you think worth printing. I must confess to a certain amount of pique on that subject, though, as I have had a copy of the handbook—advertised in the May ASF as "now available!"—on order for a month with no results.

Is there really such a book? My cancelled check has come back, anyhow.
—Elizabeth M. Curtis, 201 Veterans Village, Canton, New York.

Thanks muchly! This sort of personal-viewpoint review is genuinely helpful.

Dear Mr Campbell:

It is a characteristic of most debates that the protagonist of each side invent their own version of opposing arguments and then proceed to show how silly they are. "The Malayan Elephants" is a prize example! Some of it, of course, is drawn from sources other than L. Sprague de Camp, but I note that he carefully selects only the weakest opposing arguments to refute—and then has the temerity to accuse "Diffusionists" of *selecting* evidence!

The theory that the great civilizations of history had a common origin is too well established to be refuted by these methods. I note, however, that de Camp implies this theory is the special province of what he calls "extreme Diffusionists." He goes on to suggest that the idea that *both* "diffusion" and independent invention can happen is a virtue exclusive to "anti-Diffusionists." Now that makes all "Diffusionists" extreme or otherwise, "anti-Diffusionists"—a proposition which I find very difficult to grasp.

Basically, de Camp seems confused concerning the kind of "inven-

tion" which is used to demonstrate common cultural backgrounds. Inventions mothered by necessity are definitely not an argument especially in favor of a common cultural theory. Canoe paddles and horse collars hardly figure in the discussion at all. A belief in God is a slightly better argument inasmuch as there is no necessity *per se* to suggest the idea of God—but it is not a particularly good argument.

Concerning the "selection of evidence" accusation, I rather think that de Camp points it in the wrong direction—perhaps in the belief that an attack makes the best defense. The beauty of the common cultural theory is that it can obviously explain things that other theories must ascribe to coincidence—which is never an acceptable explanation of anything—or to nebulous ideas of psychological evolution and maybe telepathy. At the same time the common cultural theory leaves undisturbed any questions which have already been answered satisfactorily in other ways.

This is already a long letter and I should close it, but inasmuch as it is only my second letter to ASF in some fifteen years, perhaps the editor will indulge me long enough to allow me to raise a question about de Camp's remark concerning the great pyramids. De Camp, along with the orthodox scholars which he seems to hold in such awe and reverence, says they were tombs. Were they?

If they were, then why was Zoser, who built the first of them, buried at Bet Khallaf among his ancestors? If they were, why did Seneferu build two of them, and why is there no evidence that he was buried in either? And finally, if they were, how did Cheops propose to get himself buried in his—the Great Pyramid—when he didn't leave any entrance to it!

Concerning that last question, I should point out that there is an entrance passage which leads to the so-called King's Chamber in the Great Pyramid, but it is sealed off by a twenty-ton granite plug. It was at one time suggested that this plug was originally at a higher point in the passage and was then dragged to its present position after the biers were in place. Obviously the proponents of this theory were not engineers. They should try dragging a twenty-ton slug of granite down a hundred-foot passageway no bigger than itself!—F. Sutherland Macklem, 136 Smith Street, Freeport, L. I., N. Y.

The Editor is standing off to the side; we will let the contestants settle this!

Dear Mr. Campbell:

My husband and I both enjoy your magazine very much but we are at a loss to understand your request for "cover comments" on the May and June issues.

Undoubtedly the May cover is a classification of art, but it goes without saying that your June cover is tops. Surely that cover falls into a higher class reserved for our best. If there is no such distinct class, the June cover should open the door to a new one—Mrs. Wm. L. Finger, 55 Sigourney Street, Hartford, Connecticut.

But you—the reader—not I as editor, are the determining power!

Dear Mr. Campbell:

It is impossible for me to withhold my dissatisfaction any longer, Mr. Campbell. As a Phi Beta Kappa from Stanford University ('37), a reader and collector of your magazine—I have every issue of Astounding from Vol. 1, No. 1 of January, 1930—and a person who has made a living for almost two decades as a handler of words, I feel fully qualified to present my source of irritation: the dialogue employed by some of your writers.

Time and again I have been forced to skip an otherwise interesting tale made intolerable by the outmoded and even insipid conversations that clog up the theme. Must it be inevitable that the English language remain at a standstill while light-years of progress and eons of technical advancements grace Mankind? Are Space Pilots and Astrogators and Semantic Experts and Cyber-

neticists of the infinite future doomed to the irritating use of hackneyed phrases, poor grammar, corny sayings, and "ain'ts," "hiyas!" and "yeahs"? If so, then I were better off to remain in the Real Worlds of artists like Hervey Allen, Jonathan Swift, Cicero, Gibbon, Poe, or even Edgar Rice Burroughs.

I simply cannot condemn the Super Splendid World of Tomorrow to the kind of speech many of your authors fashion for its inhabitants. It is imperative that our speech and methods of communication parallel our progress—but one look into some of your stories, and I am filled with doubt.

To illustrate my contention, here are some excerpts from the dialogue in the March and April (1950) Astounding SCIENCE FICTION issues:

March: (1) From Hubbard's "To the Stars":

Swiftly: "Oh bosh, Corday. Come off it and try to live like us mortals."

Queenie: "When are we going to take up regular, déarie?"

Yard Superintendent of Space-ship Repair, year around 15,000 to 25,000 A.D.: "Gosh. You did? Say, you boys must not care what you do. I seen one once on a ritocrat's girl friend."

(2) From Fyfe's "Conformity Expected":

Lang (expert engineer on interstellar ship reaching Kaolo, Procyon VI): "Fine thing—bitin' a fellow you been livin' with. I shoul'da hit him."

Driver of Future Taxi: "Don' pay no mind tuh them—tha's whut they use fer arms."

Lang: "Kinda big for a pet, ain't it?"

(3) From Piper's "The Mercenaries":

Suzanne Maillard, cosmic ray expert: "Oh, my dear! That but stinks!"

Sir Neville Lawton, electronics expert: "Oh, my dear Aunt Fanny! And Nayland goes positively chackers on security . . . now I've seen everything!"

Ahmed Abd-el-Rahman: "Look, chief: I tail this guy . . . he goes into the rec-joint. I slide in after him, an' he ain't in sight . . . I'm looking around for him, see, when he comes bargain' out of the Don Ameche box . . ."

(Mr. Campbell, don't you think that is a little preposterous? Author Piper explains it away thusly: "The Arab had learned to speak English from American movies." Now, as a sound logician, I say such far-fetched excuses for poor dialogue of this type are execrable. Does an intelligent member of a World Research Team learn English from movies? And if so, is there only one kind of motion picture language, that of the "deze, dose, dems," and similar gangsterisms? And most unconvincing, are the movies of 1965—the time of the story—to be compared with and similar to those of the '30s and '40s? Tell me, Sir Piper, how long can Don Ameche last?)

(4) Some quotes from the humans in Jones' "Regulations Provide," a story which implies super mechanics, genius spaceship repairing, and a civilization built of friendly galaxies.

"Yeah, they might be, mightn't they . . . 'Sfunny . . . O.K., I'll send out Perkins and his crew . . . This Nerane ship is a screw-ball setup . . . Yeah . . . irritate 'em . . . like itching powder under their shells, huh? Yeah . . . yeah . . ."

Thus, in four out of five stories from the March issue, the English used by the main characters is inconsistent with their environment . . . atrociously so. Now, the April number:

April: (1) "From Hubbard's "Greed":

Lorrillard, hardy, savage, brilliant goal-attainer, a giant among his kind: "Hook 'em? . . . Here we go kid . . . keep 'em coming . . . uhuh . . . Say, Mr. President . . ."

(2) From Blish's "Okie":

Amalfi, Mayor of super space-cruising city:

"Yep . . . Yeah . . . looks like we didn't fool 'em . . . O.K. . . . Whoop it up there on Forty-second Street . . . What D'you think you're doing, warming up tea? Thanks, we love you too, flatfoot." (This last delivered to interspace police captain.)

"No soap."

(3) From de Camp's "The Inspector's Teeth":

Fitzgerald and Lengyel, two college men of the Great Future, discuss a possible Fraternity Brother: "We're still a club of gentlemen . . . and Hithasefa sure ain't no man."

"... Why d'you think Atlantic's one of the few universities left with fraternities? now . . ."

"Nuts!" said Fitzgerald . . .

"Nuts to you, Brother Fitzgerald . . ."

"Hey!" cried Fitzgerald, "You can't do that!"

"Says who?" said Lengyel . . .

(More talk follows, ending with this novel term of endearment):

"O.K., -Stinker," said Lengyel.

(4) From Munro's "U-Turn":

Various quotes: "Dunno so much . . . That plays hob with the odds . . . Yep, just these . . . Go easy, will you? I've got a fat nut . . . Holy Smoke, do we have to go through all that again? You've been foxed . . . I'm no babe myself . . . You said it!"

Well, Mr. Campbell, there are four out of five stories again, all of which take place in a very remote and ADVANCED FUTURE. Perhaps the authors believe that language will recede, dry up, coagulate, turn sour, or what— But if writers are to be writers, then every detail of a story must be carefully considered, and surely the speaking dialogue of any narrative is important.

I often wonder if enough people realize that the greatest author of them all, William Shakespeare, wrought his magic and reached his pinnacle by use of spoken lines, alone! And the language of each of his characters is in harmony with the personality, position, and environment of the speaker.

I'm not a critic. I'm just a little saddened by the abuse of what I consider a beautiful method of expression: the English language. When I was president of my fraternity—Beta Theta Pi—some fourteen years ago, we did not go about shouting "Nut" and "Stinker". A good vehement swear word, as used by Philip Wylie or Voltaire, has more pith than the mouse phrases of adolescents.

So I close my book. No offense

meant to any author—the ideas are sometimes superb; plenty of imagination, a wealth of scientific background, a positive grasping of the subject matter—but I implore you, let us not forget that the pen, being mightier than the sword, can also cause a scratch that might become infected. I have a story for you myself. Would you care to wander through it some time?—Winstead Doodles Weaver, 360 N. Camden Drive, Beverly Hills, California.

I'll be glad to see that story—but I insist you, like our other authors, translate from that double-talk future language you use on the radio show to English having equivalent values to modern ears—and also keep the postal censors happy!

(Continued from Page 5)

voltage atomic research equipment, more nuclear reactors—atomic piles—longer than anyone else. Whatever the secret of gravity is, the atomic nucleus is the place to look for it. And the mystery of the binding forces that hold nuclear particles together is the main concern of nuclear physics—forces that pull things together.

The Manhattan Project was not, truly, secret; it could not be because such immense masses of industrial equipment, such strange and huge mechanisms as the calutron isotope separators could not be produced in secrecy, actually. Plants the size of the Oak Ridge works, with world-record orders of concrete and reinforcing steel, requiring huge armies of skilled construction men, could not be secret. It was simply impossible. You can't build big, strange mechanisms, for strange, and hitherto unknown uses, without some at-

tention being paid by the workmen who construct it. Oak Ridge was wrapped in secrecy; the workmen weren't supposed to know what they were doing. But—the drugstores in Oak Ridge were stocking on their counters copies of Pollard & Davisson's "Applied Nuclear Physics." Not a book ordinarily in demand on drugstore counters

How then, could a flying saucer project, necessarily requiring large, strange constructions, be kept so completely secret?

Of course, the Atomic Energy Commission is constantly buying large, strange devices, and everybody knows that they're secret, and you don't go asking just what they're to be used for. The parts used in building nuclear reactors, and similar devices, are built under security, and no matter how strange a device it may be, nobody asks questions

THE EDITOR.

THE ANALYTICAL MIND

BY L. RON HUBBARD

By this time, many a dianetic pre-clear is becoming convinced that most of his life he has been running strictly on engrams. By no means; the analytical mind is very definitely in there pitching. And these are the ways of its workings:

In studying the present text and releases of dianetics one is liable to the error of believing that dianetics concerns itself mainly with the reactive mind, that collection of "unconsciousnesses" which bedevil and plague mankind.

The mind, however, is important only to the degree that it can observe, pose, resolve and execute problems. In that the reactive mind is no more capable of actually resolving a problem of magnitude than a prefrontal lobotomy is capable of restoring sanity, it can be seen that the analytical mind is the truly important entity.

Dianetic processing relieves the human being of all mental aberration and psychosomatic illness*.

This accomplishment was made possible by the discovery of the actual identity of the "unconscious" mind and the development of techniques to unburden it. But dianetics also includes in its sweep, the other minds of the human being, the analytical and the somatic. Actually the analytical mind is so important to the intelligent being and the somatic mind so important to the athlete that dianetic processing can be said to consist of de-intensifying the reactive mind so that the analytical and somatic minds can be free to function properly.

Once one has been "cleared" by dianetic processes—which is to say, once his aberrations and psychosomatic illnesses are vanquished—he operates exclusively on his analytical mind and somatic mind. Therefore a study and knowledge of these is

*See earlier article in this publication or "Dianetics: The Modern Science Of Mental Health, Handbook of Therapy," Hermitage House, One Madison Avenue, New York City, (\$4.00)

vital if one is to achieve maximal efficiency after he has attained optimum potential. Further, the matter is of intense importance to the dianetic pre-clear because he is prone, wandering through the idiocies of his reactive mind during sessions of therapy, to believe that he has had only his active mind in operation all his life—there is so very much contained in it.

To bring about an understanding of the analytical mind and to dispel illusions about the “force” of the reactive mind, a division of dianetics called “Analytical Dianetics” is delineated herein.

Analytical Dianetics covers all activity of the analytical mind in determining behavior, solving problems and directing the body through the somatic mind. Included in Analytical Dianetics is a sub-science, “Educational Dianetics” in which the processes of learning are covered, academic and nonacademic. But here we treat only the character and performance of the analytical mind itself.

The first fact of interest about the analytical mind is that it is a very solid and practical citizen and is yet capable of the most fantastic imaginative flights. It is a highly variable article in that it can play any part, can act the buffoon or the sage, can treat any subject, from the buying of all-day suckers to the creation of the world, with aplomb. In truth it is insufferably cocky in its abilities and performances and, what is more surprising, it has every reason to

be. A cleared analytical mind treats only with data it can weigh or wishes to weigh or evaluate. It runs so closely to the Doctrine of the True Datum in all its actions that, in a society where self-effacing is the mode, it must install a self-effacing mechanism. But it would *know* that the mechanism was of its own creation and could shuck it off at will. In a cultural pattern, as in the Southern States, which holds a woman should be beautiful but not brilliant, the analytical mind can install a mechanism of apparent stupidity to be fashionable and then, having installed it, can go right on being brilliantly stupid without for a moment believing it is stupid.

Chameleonesque to an extreme, the analytical mind, behind every mechanism it creates for itself, is yet entirely true to itself. It knows when it is imagining and can fly to high heights of imagination and then convince itself for the necessary illusion, that the high flight is true. But it doesn't then treat that flight, in its basic computations, as a true flight.

The analytical mind, for instance, can do a much finer job of putting on an insane show than can the reactive mind. The analytical mind can install in itself, and kick out when no longer needed, enough weirdities to convince any psychiatrist of its utter madness. And puckishly it may, on a whim, do so. But not once during that show would the analytical mind be other than utterly and superbly sane.

In short, the analytical mind can set up, within itself, on its own demand, "demon circuits" and "demon computers" which will then give forth any variety of fantasy, wildness or farce.

But there is a vast difference between the analytical mind setting up fantastic and "irrational" circuits and the reactive mind commanding those circuits to be set up. For, short of dianetic therapy, the reactive mind is set, and the circuit is permanent and "unalterable". When the reactive mind shoves forth an *engram* commanding an insane action, that series of commands is obeyed implicitly for if the body does not obey them, then pain is inflicted by the reactive mind.

This should clarify the role of the analytical mind. It is the action direction and thought center and the *only* action and thought center. *It contains as an inherent necessity to thought every mechanism of insanity, aberration and psychosomatic illness.*

This fact, not understood, brought about an alarming misconception in past superstitions about the mind. It is believed that because a mind was *capable* of acting insane or producing illness that it *was* the mind which produced insanity and illness.

There is a wild and wide difference between capability and cause. And if you suppose for a moment that this difference is not important, witness the fact that considerably in excess of ten thousand luckless human beings have had their

brains torn to bits by psychiatrists who against the advices of the better colleagues, practice such idiocies as the prefrontal lobotomy, transorbital leukotomy, topectomy and other neat quick methods of killing the mentality and spirit. And witness the fact that hundreds and hundreds of thousands of Americans alone have been victimized by electro-shock, insulin-shock and other substitutes for the clubs and whips of old Bedlam merely because a capability was misconstrued to be a causative.

For instance, an automobile is capable of killing a dozen people in a matter of seconds, by hurtling at high speed into a group waiting at a street corner. Now the automobile is a finely built mechanism, highly responsive, capable of smooth, swift action—a mechanism of immense value to the entire civilization. We can, of course, prevent killing people at street corners by smashing automobile engines with dynamite, by cutting them up with oxyacetylene torches, or welding them solid with electric arcs. Unquestionably the automobile is the unit *capable* of killing the waiting pedestrians—but the *cause* of the catastrophe is the moron directing the action of the fine, responsive mechanism.

Destroying the capability of the machine will, of course, prevent the moron from displaying his lethal activities: he, alone, has no such capabilities. But it will also prevent that machine from ever being of any further use to society, and a lethally-inclined moron is certainly of no use

to anyone, including himself.

To make the analogue dianetically more accurate, our automobile should be in the control of the murderous moron because his highly intelligent, competent brother has been knocked unconscious, giving the moron a chance to seize control.

Because the separation between automobile and driver is self-evident, there is less tendency—although the tendency still exists—to blame automobiles for the ensuing destruction. But because there is no visible, easily seen separation between the incredibly capable analytical mind, and the moron driver of the engram bank, it has appeared that the analytical mind was at fault.

The automobile is big, easily accessible, and can quickly and easily be put out of action. Eliminating the capability is easy. The fault lies in the moron driver—but they're much harder to deal with. The result has been a tendency to take the quick, easy path; when a psychotic individual does not respond easily and satisfactorily to the psychiatrist's efforts, there is a tendency to attack the capability for action, because it has not been recognized that the moron driver—the engram bank—was the cause.

Those psychiatrists who have insisted on prefrontal lobotomies, and the rest of that class of neurosurgical operations, have never claimed that these operations cured insanity. Fortunately, the top psychiatrists of the nation have strongly resisted, and strongly questioned the pro-

priety of using those techniques; even before dianetics was available, the best and most thoughtful men in the field were strongly opposed to neurosurgery of the mind-destroying order.

The psychiatrists who did perform prefrontal lobotomies defended the operation primarily on the basis that it "makes the patient more tractable." That it, in other words, leaves the insanity intact, but removes the capability of the individual to such an extent that he can no longer annoy the attendants so much. In our automobile analogy, it doesn't take the murderous moron out from behind the wheel, but it renders the automobile incapable of operation.

The unfortunate individual on whom such surgery is practiced, of course, remains as insane as ever; his mind is still tortured by the delusions, the demon circuits, the terrible hates and overwhelming fears that originally made his psychotic. But where, before, he retained sufficient analytical mind power to at least attempt to fight against those horrors, his defensive mechanism has been destroyed. Now the sum total of the agonies and terrors of all his years are free to overwhelm him. In such state, quite naturally, he is indeed tractable. Where before the operation the violent psychotic was at least trying to fight back against that inner world of engrams, he is now incapable of resistance; he has succumbed to them completely and become satisfyingly tractable.

Attacking the capability of resistance, the capability of action, which lies solely in the analytical mind, does not in any way attack the cause. There is a special nerve group in the body which has the function of body-temperature control. One can imagine a nerve-cutting operation which would make it possible to cut this control mechanism out of circuit. If a patient showing a high fever during a malaria attack were so operated on, no doubt his fever would abate quickly. The capability of producing high body-temperature has been removed; the cause of the fever—the malarial parasites—are now free to multiply without the hindrance of that mechanism of resistance.

It is overwhelmingly important to distinguish sharply between the mechanism of action and the mechanism of causation. The analytical mind, and only the analytical mind is capable of bringing about action. Since it is an immensely capable and complex mechanism, it is fairly large, and quite accessible; so far as is now known, it appears to have its organic seat in the prefrontal lobes. The structure of the analytical mind, and of the reactive mind remains unknown at this moment. This much is known; slicing up the pre-frontal lobes does not in any way weaken the engram bank or the reactive mind; it simply eliminates the analytical mind's power of resistance.

Hence it is of vital importance to understand the character and role of the analytical mind. Between the

time this is written and the time it is published, approximately one hundred and ten thousand American men and women, fathers, mothers, children, veterans who gave all they had to our society, will be permanently damaged, made permanently insane or killed by those methods which seek to crush insanity by ripping to pieces the only portion of the mind which is capable of rationality.

The reason these methods continue can be listed as follows:

- (1) The character and function of the analytical mind have not been understood.
- (2) No method of any kind before dianetics was other than experimental.
- (3) Few believed the problem of the human mind could be solved.
- (4) To do other than administer such treatment was malpractice.

The last is the joker which victimizes the psychiatrist. When a doctor departs from past methods he is potentially guilty of malpractice. A method is admissible in practice mainly because it has been used, not because it has worked. In such a way the first doctors who used penicillin were technically guilty of malpractice and had penicillin failed to work and had harmed the patient, these doctors could have been disfranchised as practitioners by both the State and their professional society. All this neurosurgery and shock, without ever having done good, was not malpractice because it came to the United States, one is told, with

Authoritative recognition. Once here and practiced it becomes standard practice. A departure from it is now malpractice and would be "malpractice" if such methods cured every patient to which they were applied.

Psychiatry, by attaching itself to the medical profession, became liable to the codes of the medical profession. In *medicine* these codes have been found useful and necessary and are based on custom, the only creator of law. In psychiatry there was, actually, *no* method which was custom-created. Freud was so thoroughly shunned by neurologists of his day and medicine ever since that only his great literary skill brought his work as far as it has come. Freudianism was not extremely dangerous and had some points on the right track. But technically, Freudian procedures were for years malpractice in neurology.

All these practices came about from an error on the part of investigators of the mind. Because the computer was forced to use data thrust upon it from an unseen source, the psychotherapist thought he saw that the computer itself was in error. His thoughtless solution, then, was to blame the computer.

For the analytical mind and, during "unconsciousness," the somatic are the *only* minds which can manifest the mandates of the reactive mind. The reactive mind cannot manifest those commands. It can slam them against the underside of the analytical mind while it is "awake" and pervert the ability of

the analytical mind. If there were no analytical mind, *no* manifestation would take place. Thus, prefrontals change the affect of insanity. Thus, electric shocks *et al*, by damaging the analytical mind inhibit the display of the aberration. For the aberration can only be displayed *via* the computer and its switchboards.

Now there has been another misconception regarding the analytical mind. It has been believed that it was a composite of insanities. Indeed, the personality itself has been maligned by being called a compound of neuroses, compulsions and repressions erected upon an animalistic base. Very accurate and thoroughly checked dianetic observation proves that the personality is an inherent factor in all its strong aspects and that individualism is built into the genes as certainly as fingerprints.

This personality is muted and its individualism weakened by commands emanating from the reactive mind and forced upon the analytical mind.

The very thought mechanisms of the analytical mind are the only things which make the manifestation possible.

Thus we have "demon circuits"—like by-pass and filter circuits added to a radio—which the analytical mind, operating free of the reactive mind, builds up or takes down at will. These are *never* aberrative when so constructed by the analytical mind. They are vital to the action

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of thought itself. The playwright sits back and "hears" and "sees" his various characters moving through the action of the play. He is computing them. But to do so and make them vivid, he sets up a series of "demon circuits," one for each actor. So long as he is writing his computers—imagination computer—furnish the dialogue and action and plot which moves these characters about on the stage of the "mind's eye." A cleared-playwright or one who has full sonic and visio imagination, actually sees and hears his characters acting and talking in a most natural way *inside his analytical mind*. Writing the play is a highly natural action.

A caveman, studying out the best way to kill a saber-toothed tiger, "wrote" himself a play. He imagined the tiger, he imagined himself, he imagined the scenery. Out of imagination—building up the accuracy with past experience and data received from other hunters—he went through the entire action. In doing so he was also calling in his somatic mind and giving it instructions without any effort on his part. Then he went and killed the tiger. If he had no very good imagination, the tiger killed him. No problem of life of any magnitude, can be worked out without these mechanisms of imagination.

But let us suppose that our playwright has engrams, reactive mind commands, which tell him all women are evil. He could, on purely analytical basis, dub-in this datum if his plot seemed to need it. But if he has

an engram about it his playwrighting is sorely limited because he can only plot in terms of the engram whenever his plot skirts that portion of the play. Thus *all* his women are evil and all his men think women are evil. And he has lost facility and variety. For without this engram, he has a choice about it. With it he has no choice. And in just that fashion he is limited in his plotting.

One novelist who was given diaphanetic process had long since failed and was working in a menial position, miserably unhappy. He had had only one plot. That plot hadn't fitted the public concepts too well in the first place. And that plot was contained verbatim in his reactive mind. When the analytical mind tried to think of a plot it could only rework this old one. Further, it's intelligence and imagination was inhibited by the engram. So he wrote tremulously and with considerable effort. When the engram was lifted—a complete story by Oida called "Under Two Flags" read to the mother when she was recovering from an injury which had also injured the child—this novelist stopped being fixated on stories of such an artificial character, his people came to life on his pages and he was not merely rehabilitated, he was able to become what he inherently was, an excellent novelist. Now he could write, if he liked, stories patterned on "Under Two Flags," or yarns of the "Confession" type, or tales so modernistic even he couldn't understand them. His analytical mind now

had full, not reactively limited, scope.

But the analytical mind had been the thing which wrote even those stories like "Under Two Flags" when he was aberrated. The ability was completely and entirely within only his analytical mind.

The caveman trying to imagine the plot for his killing a saber-toothed tiger might have been possessed of an engram to the effect that tigers always and only jumped to the right. He could have observed on scores of occasions that tigers also jumped to the left but, if the engram had been very strong, he would have gone right on "believing" that tigers jumped only to the right. So his plot about killing the tiger would have contained an untrue datum. And the moment he put it into action he might have been victimized or killed because of that stet datum.

But the analytical mind was the thing which did all the imagining about the tiger, which built up the whole attack and which put the plot into action.

In other words whatever is dictated by an engram only inhibits analytical action. *And whatever a person can do in an aberrated state he can do far better when he has no further aberrations.*

Now let us take an insane person whose insanity consists of the fact that he says everything which is said to him like an echo and who does every physical action he sees the person he is watching do.

His engrams tell him that he has



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to do this. They do not make it possible for him to do it. They only command.

The engrams are impinging against that ability of an analytical mind to mimic.

A bulk of the learning done in a lifetime is through mimicry. A three-months-old baby will lie in its crib and do an excellent job of mimicking the mouth actions of the mother. The mother may be trying to make the baby say a word. The baby moves its facial muscles, coos between tries, gurgles, crows, tries to get control of those vocal chords. But it mimics the facial action of the mother. That baby is learning.

A parent may believe that a child learns to use a napkin, knife and fork merely because he is told that if he doesn't use them properly he will be spanked. By test, this inhibits the natural learning, putting an artificial command under the natural ability to mimic. The common result of this is to cause the child to revolt. If the child is permitted to observe, without coaching or coaxing, adults eating with knives and forks and using napkins the child, unless badly aberrated, will, by test, struggle and fumble to mimic. And it will come up at last with manners. *Better* manners than those forced upon it, providing the parents themselves know how to use table silver and napkins properly. When the child, like those trained in the pre-dianetic school of only-being-a-child-is-important-don't-inhibit-the-little-thing-for-the-whole-

family-revolves-around-it-you-little-fool, has lost any urge to be a grown-up, he avoids mimicry of grow-ups and mimics children. But he mimics.

An enormous amount of knowledge goes straight into the analytical mind through mimicry. A little girl, for instance, who is raised with a dog is liable to mimic the dog and, like a recent case, get down on all fours and scratch the door to be let in.

Men mimic selectively when they are unaberrated; unselectively when they are aberrated. In the case of the insane person who echoes vocally and muscularly any person before him, the mimic mechanisms of the *analytical mind* have been impinged so heavily by engrams that unselectivity is the rule in the extreme. But the analytical mind is being forced from under to use its mechanisms. And the mechanisms are those of the analytical mind. Take out the engrams causing it—something like: “You have to do everything and say everything you see and hear”—and the mimic mechanisms of the analytical mind correct instantly and rational mimicry results.

As in the case of the playwright and caveman, the “demon circuits” which talk and act on the stage or growl and prowl in the jungle are both natural mechanisms of the analytical mind. The reactive mind, however, by engrams, can force “demon circuits” into action so that the analyzer has no control over them.

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THE ANALYTICAL MIND

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Then you get a case with voices mysteriously talking to him or a case which "thinks" in words instead of conclusions. All audible or sub-audible "stream of consciousness," whereby something in the head is articulating thought, is caused by reactive mind engrams. But it remains that the only reason the engram can bring such a circuit into play is because the analytical mind natively contains circuits which can come into play. You can wreck these circuits with shock or surgery as a baby can ruin a radio by taking a hammer to its works, but the circuit belongs to the analytical mind and is only forced into aberrative action by an engram which, no matter the wreckage, is still very much there but has no mind to act upon.

The analytical mind has many other powers. It can control the various fluid flows and growths of the body, apparently, since any clear can do startling things with his heartbeat, breathing, endocrine balance and other things if he wishes to take the trouble. The reactive mind pushes an engram against the analytical mind and forcefully throws the mechanisms out of action and also, in most cases, out of the control area of the analytical mind—and here we have psychosomatic illness, chronic overaction or underaction of glands, secretions and other fluids and overgrowth or undergrowth of the body itself. The hebephrenic schizophrenic is noted for the smallness of his adrenals. He is psychotic

and he is psychotic because he has engrams. Give him the fluid or hormone he is not adequately manufacturing and you may or may not get some reaction in his body—for the engrams may inhibit the fluid from being used even when it is injected. De-intensify the engrams and you observe the adrenals grow to normal size; if the person is young enough, or the body use injected fluid given to correct the imbalance if the person is well past middle age. Tear up the analytical mind of this hebephrenic schizophrenic with electro-shock or, even more criminal, rip him up with brain surgery and thus reduce his analytical mind and three things may happen: 1. not enough analyzer may be left to do anything about his adrenals, so they remain the same and he remains insane; 2. not enough analyzer may be left to control the gland growth and so the glands grow without restrain; or 3. the analyzer responsible for the control may not be touched and the patient may have little change in his condition.

Actually, the analytical mind has many parts and many abilities. It contains the individualism, the personality, the ambition, the persistence in life, the vigor of action, the observing and computing and imagining abilities, and, not the least, "I" itself. Other abilities and functional actions are also seated in the analytical mind, many more than can be accurately known at this writing for ESP in particular is evidenced largely and is disturbed

by anything which inhibits the analytical mind, a matter now under research in dianetics.

There are many methods the analytical mind has to protect itself even against the reactive mind. Possibly in another hundred thousand years, given that his personal and cultural aberrations had not destroyed Man entirely, the analytical mind would have more fully evolved protective mechanisms. The trend it has been taking, however, has not been toward the self-clearing of the reactive mind. This is probably a problem somewhat like the newly commissioned ship commander who, though victimized by an unruly crew, yet, by naval orders, cannot rid himself of their mutinous presence. His recourse is toward self-protection in the interest of greater ability to command and safeguard his ship. It may be that in studying his crew he finds a method of making the recalcitrants null and void without hurting the manning of his ship. Evolutionarily, the analytical mind is going in the direction of self-protection and higher authority. The second method, voiding the power of the mutineers without hurting the crew, is the sudden interjection of dianetics which de-intensifies engagements without hurting the ship but, on the contrary, increasing the ability of the ship as a whole by getting all the crew to work with enthusiasm and cheerfulness toward the goal the captain appoints.

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has such a stratum of rationality—has in all cases so far processed by the testing group of dianetics, two hundred seventy-nine, demonstrated a remarkable co-operation. “The mind knows how the mind works.” There have been cases so thoroughly swamped that this co-operative flicker was barely discernible and could be put to rout by engrams, but even these, as soon as some of the reactive burden was de-intensified, began to manifest greater and greater co-operation in processing.

The analytical mind, then, can be said to be in agreement with dianetic processes and, indeed, dianetic processes were evolved by paralleling analytical mind action. The reactive mind is directly opposed to dianetics. Whatever impedes the auditor in putting a patient through therapy has impeded the patient's own analytical mind. The equation that the analytical minds of the auditor and pre-clear have greater power than the reactive mind of the pre-clear is the principal thing that makes therapy possible. The analytical mind of any patient is striving mightily against any burden in the reactive bank even when the reactive bank is so in evidence—as in a psychotic—that it composes all the patient's thoughts and actions and even makes him initially resist therapy. A person is aberrated because his own analytical mind, alone, cannot cope, save in artificially or naturally raised necessity, with his reactive burden.

Engrams and the reactive mind

derange and aberrate the ability and body of the patient only *through* the abilities of the analytical mind. The reactive mind can only push and shove against the analytical mind to make action possible.

The analytical mind “remembers” by returning some of its attention units to past moments either on a fast network conceptually or upon the central time-track itself. The reactive mind, armed with pain, shoves into those networks and makes some of this returning impossible. Therefore the analytical mind is said to “have forgotten” but the truth is, the data is right there but blocked. The reactive mind makes it difficult to remember something for actual pain would be felt by the body if that thing were remembered. In dianetic processes this matter is cared for and the analytical mind can get by and de-intensify these moments of pain which are the whips of the reactive mind.

The cells, as staunch conservatives, idiotically believe, it seems, that anything which was painful will always be dangerous and they inhibit not only a repetition of the action in the exterior world of now but they inhibit a re-experiencing of a painful action in the interior world of then. Actually the analytical mind, by accurate computation and recall and with far, far more accuracy, contains a mechanism which inhibits repeating an action once painful. It computes even faster than the reactive mind reacts, once the analytical mind has concluded, for instance, “that

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putting a hand on the stove gets the hand burned. It is as if Man has evolved a highly "competent" captain in the analytical mind but that the crew, uneducated and silly, still will not trust him, even though he is fantastically trustworthy and far more able to prevent disaster and gather benefits for the crew than the crew could.

Anything the crew, as we might consider the cells, think should be enforced is enforced only through the computers and switchboards of the analytical mind. Thus came about the entire misconception that the personality was built up of neuroses.

It could be said with accuracy that the personality is the analytical-mind individualities, and physical characteristics. And it could be said that neuroses could not manifest without an analytical mind to subvert. And it could be said that the personality plus the neuroses of a human being make up his manifested personality. And it could be said that no neurosis could manifest without usurping the circuits and abilities of the analytical mind and cutting down its power. And it could further be stated that a neurosis is without any characteristics or power unless it has an analytical mind upon which to impinge itself.

Clearing away the aberrations intensifies all the strong points of the analytical mind and de-intensifies all the weak points of the aberrated personality and such clearing intensifies the individuality and the personality.

One of the prime operating mechanisms of the analytical mind is that it attacks resistance to the greatest good of the greatest number involved in any problem. It may be very clever in its attacks for it also preserves the organism, progeny, the group and Mankind of which, remember, the organism is a part and which would be weakened by the loss of the organism itself. Give the analytical mind a target it cannot subdue by reason and it begins to direct attack in other ways. It works, in other words, against obstacles. When there are no obstacles it amuses and enjoys itself by inventing obstacles. But its activity is metered by the problems it observes or poses to itself and is regulated by rationality—not stimulus-response which is the characteristic of the reactive mind. It uses five methods of handling problems—it attacks them, avoids them, falls back from them, succumbs to them or neglects them. The problem is often of great magnitude and may not be subdued. But the analytical mind—not the reactive mind—has a gauge of necessity level. It builds up force against a problem usually above and beyond the force necessary to overcome the problem. Because it is a perfect computer, modified only by the validity of or lack of data, the analytical mind, in a cleared state, can work up an enormously high necessity level. It does not do this on a stimulus-response basis either for it can rig up an artificial necessity level against a real

problem, can generate an actual necessity level against an imaginary problem or can generate an artificial necessity level against an imaginary problem, artificial and actual here: being used to identify pretended resurgence or uncomputed resurgence.

In the aberrated mind this necessity level can also be raised artificially or actually. But it is always the necessity level of the analytical mind. When an engram is restimulated on a stimulus-response basis, the necessity mechanism of the analytical mind can be usurped to make the organism prone to the most outrageously impossible actions, actions like maniacal murder or carrying pianos singlehanded from a burning building while the baby is still inside. Evolution has been working on separating this necessity level mechanism from the reactive mind control evidently. For artificial and actual necessity levels can be raised *against* the reactive bank itself and can actu-

ally make an engram back up or a whole set of engrams which, by stimulus-response, should be in restimulation, drop completely out of sight.

A writer, for example, who had been nearly insane for two years and who had a reactive mind full of engrams against writing, was suddenly confronted with an illness of his wife's which required two thousand dollars worth of treatments immediately. Promptly, he kicked up his necessity level and turned out one hundred thousand words of short stories and novelettes in twenty days which brought him twenty-five hundred dollars and which were pronounced as some of the best work he had ever done. His wife became well and he resumed his miserable state of inactivity. As neither he nor anyone else knew, at that time, much about the mechanism of necessity level, his eventual recompense was revilement from all quarters because

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he was now "understood" to be "lazy" and had demonstrated what he could do if he "just faced reality."

An engram can take over this necessity level mechanism, just as engrams of various sorts can impinge upon any mechanism of the analytical mind. The most sorrowful examples of this sort can be found amongst the world-conquerors in which our rather puerile histories specialize. Wading in blood and piling up "enemy" skulls these social liabilities are generally driven by engrams which dictate that they *must* conquer.

Now it happens that their necessity level mechanisms and their abilities to compute and especially to act must be very, very high, far above the average. And something else has entered the equation here.

All people have, in degrees varying not only from person to person, but from dynamic to dynamic within the individual, their four dynamics of self; sex—the act and care of progeny—; group—whether special or civil, city or nation or race—; and Mankind. Each is a persistency toward survival in the particular catalogue of the dynamic itself. Thus one can have an enormous force to perpetuate himself as an individual, another can have an enormous force individually to create and raise children. All unaberrated persons have, in some degree of force, according to dianetic findings, each of these four dynamics.

When an individual has engrams—and all do unless they are cleared—

these engrams usurp or force against not only such things as imaginative circuits and mimicry but also against the dynamics. As a muddy creek might enter an otherwise clear stream, the engrams may color and choke a dynamic. If that dynamic is powerful and if the engram impinging on it is powerful, the result can be remarkably destructive.

The world-conqueror evidently operates with a perverted dynamic. Dynamic Four, Mankind, consists of a thrust toward the greatest good for Mankind. Mankind must win, according to this dynamic; and actions must be taken to further and better and generally advance the survival chances of Mankind. An engram which dictates strongly, for instance, that everybody but Tugaboo Islanders have crazy conceptions might cause a Tugaboo Islander to try to force Tugaboo Island taboos down the throats of everyone in order to save Mankind. But the world conqueror, with an engram overworking, choking and distorting his Mankind dynamic may have such a strong group dynamic that his actions take no account of the slaughter he effects. He not only must force taboos upon the rest of the world, he can only "save" his group by the most extraordinary means.

The distortion worked upon the Mankind dynamic need not, however, result in world-conquering. Any dynamic may be so impinged and unsettled by engrams that some very weird aspects occur. It is very

common to find, in an insane asylum, a patient who claims to have a secret which will save all Mankind. This has been considered very bad, pre-dianetically. The same psychiatrist who would hammer a psychotic into believing everything that had happened to him was imaginary—and psychiatry has long been listening and calling “imaginary” actual pre-natal engrams just because “Authorities,” with no data and clumsy research had said such things were imaginary, all the while holding forth about “memories of the womb”—would and does pound hard against any patient who says he wants to “save Mankind.” It is a peculiarity that this is a particularly condemning point, that anybody wants to do

anything but be a sheep and, very tractably and “well-adjustedly” eat grass.

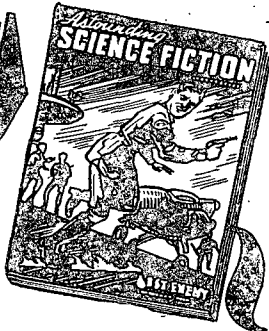
The patient, who is fond of being “God”, has an engram impinged solidly against the self dynamic. The one who conducts himself abnormally in matters of sex or children; has an engram impinged against the second dynamic. Any of these dynamics and any of their portions can be stopped or colored by engrams. *But not one can be speeded up by an engram or rendered more forceful.* The engram takes the native analytical ability and by entangling it causes aberrated manifestations of the dynamics. Three dynamics cannot be channeled into one channel by an engram and then become three times as,

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strong as a fixed idea.

If anyone has a strong self dynamic perverted by an engram which says "I am God" then manifests and acts strongly in his imaginary role as "God," will, when that engram is cleared, demonstrate about two or three times the personal force on the self dynamic. Only he won't be "God," he will become a powerhouse in some group as himself. If, when insane, he was thoroughly and violently certain that he could save Mankind, when the engram causing that is cleared, he may very rationally but with great force, actually set about doing something to further Mankind.

So long as the strange belief was held that a man was only a stimulus-response animal and that his entire being was only a collection of aberrations, that his personality was only a matter of distortions of reality, no individuality or desire was safe from question or condemnation. This was a sort of slave psychology which, accidentally or otherwise, sought to block personal individuality and initiative. Under that philosophy one could be condemned, when he said he wanted to do something to further his name beyond his physical death, as an "egomaniac," whatever that is. When one had confidence in the ability of a group to sweep all before it, he could be called monomaniac. When he enjoyed sex, he could be called a satyr. And when he wanted to do something for Mankind he could be labeled a "paranoid," whatever *that* is. Because he

could thus be assailed and pounded by these nonsensical and precisely indefinable terms, and because engrams could here and there distort these natural desires and make them unnatural, the society was pounded down, man by man, into a herd. Then one could talk of masses. One could defeat individualism. And anyone who desires such a defeat is espousing an action so thoroughly destructive that he must, and can be shown to be, thoroughly aberrated. For Man is rich only in ratio to the number of individuals whose initiative and individuality will create a better future. Wars can take place only when this sheep-neurosis can be brought about for lions don't stampede when some aberree shouts "Kill all the Russians" for lions aren't likely to be afraid. But sheep will stampede. And then they will depend upon their individuals to save them. War can only happen where self-determinism is outlawed and the sheep-psychology of "adjustment" rules the land.

Those who insist upon the tenet that the personality consists only of neuroses, compulsions and repressions is not only rather silly but is extremely dangerous to those around him. In the first place he has an engram which tells him he will die or something if he "gets rid of it" and so, by reactive computation, reactivity "desires" to be aberrated. Or he has a sympathy engram which inclines him toward the "glories of hypochondriacy." He may also be subject to that prime sheep-psy-

chology mechanism which favors "adjustment" only because people with wills of their own and force of personality are strong. A man, weak because of his engrams, seeks to keep others weak out of some idiotic hope that thus he will better survive.

The equation, however, does not work that way. The weak are strong only when they are protected by the strong. Only the aberrated weakling believes that a strong man is a cruel one. Only the weak are cruel. Only the afraid are vicious. All experience bares this out. Only the whining theorist who claims that personality is aberration would blind himself to the evidence on every hand that trouble, distress and disaster stem from the aberrated weakling. Take a square look around

you and trace back trouble wherever it existed to somebody's irrational fear of some imagined threat.

When personality can be pronounced to be the result of aberration and when individualists can then be silenced and driven into the herd, Man is looking down the barrel of the last gun he will hear.

The analytical mind functions best out at the last possible notch of self-determinism. The unaberrated individual is not only strong but he is also motivated by a uniformly present desire to accomplish the greatest amount of construction for the smallest amount of destruction. Self-determined, he is free to evaluate the situation for himself. Exteriorly determined by his own or social aberrations, he is inclined away from

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solutions which will be creative of the greatest good; further, his own thinking is less acute.

That the analytical mind can be usurped in its abilities by engrams and reduced mechanically in its power by those engrams, definitely does not mean that the analytical mind and the ability of Man depends upon neurosis.

As a final proof of such matters, there is the behavior of the so called "manic." He seems very strong along one line. He is out to supersell, for instance, anything. Nervous, driving, energetic, he attacks problems of selling with an attitude which amounts to violence. He cannot keep it up continuously for he becomes depressed. Then, in the general case, his cycle runs from high enthusiasm to deep depression and back to high enthusiasm again. The society is full of such people who pass for and indeed are, normal to this period. The surface evidence here appears that he is suffering from a neurosis which makes him a supersalesman.

But the periods of high action grow shorter. The periods of depression grow longer. Some call it old age. Some call it getting "burned out." Some say he needs more recreation. One day his clock, so to speak, runs very thoroughly down.

What happened to this man? What caused it? All cases to hand of this, a numerous number, show it to have been caused by an engram in which he was "fixed." The engram

said he was a wonderful salesman, but it contained physical pain. As he went on living he was "dramatizing" or acting out being a supersalesman. But sometimes he didn't sell. Every time he didn't, physical pain forced him to try. But he kept failing because his health was deteriorating. And then one day he didn't resurge. He just felt the pain. And he wasn't a supersalesman any more.

De-intensifying that engram in every such case brought about an immediate rebalancing. If the engram had actually made him a supersalesman then he was competent, analytically, to be a supersalesman. And he became a better supersalesman than before!

A sadder case and an even more unusual one, is where the engram says that a man must be, for instance, a great officer of the army. But the analytical ability was not great enough to make him such. Actually, his analytical ability fitted him to be a very good mason. And so we have the standard sour, rankled misfit who is said to have "ambitions much greater than his ability." That diagnosis is as false as a lot of other past preconceptions. He had "engrams greater than his ability along the line dictated by the engrams." Clear away those engrams and a resurgence of analytical power and ability becomes evident, his basic purpose manifests itself and his mind somehow works his past experience into an asset to carry out his basic purpose and, in such a case, we would have a mason amongst

masons. And he would not be "adjusted" to being a mason or "re-signed to being a mason," he would be a happy and enthusiastic mason who could adjust to the business of masonry.

And in a reverse case, one man cleared by dianetics had a manic engram dictating that he should be the strongest bricklayer in the world whereas all his analytical ability summed into a high competence in the field of music. Additionally he had engrams which said he was a clumsy and terrible musician. Cleared, he stopped being a bad and unhappy bricklayer and became a cheerful trumpet player in a name band.

In all such cases, where the ana-

lytical mind has any basic dynamic worth measuring, it has been found that one way or another the victim of a manic which sent him in one direction while his basic purpose inclined him in another has been able to gather up, along the way of life, considerable data in the field of his basic purpose. The shift has not been arduous and has never been found to swing into a field where the person had gathered no data.

The analytical mind is strong and should never be undervalued. It is not only strong in the sense that it is incredibly resistant to aberration, but also in the sense that it can rise above and conquer engrams even without therapy. Of course it cannot remain forever above those en-

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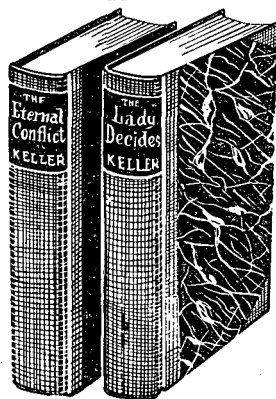
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THE ANALYTICAL MIND

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grams for new engrams may at last force it to succumb. But a person undergoing dianetic processing with an eye to greater ability should never be taken in with the statement that all he has ever done or said has been because of engrams. Fully eighty percent of his thinking and his actions were clear analytical decisions. When he begins to find out how many engrams he had and how powerful they were he should not, during the course of therapy, resign

himself to a belief that he was never competent to overcome them, for he very definitely was.

The power of the individual and Man is the power of the analytical mind, a tough, rational organism, difficult to aberrate, capable of overcoming aberrations and, when cleared especially, forceful and personable far, far beyond any pre-dianetic knowledge.

Even aberrated or uneducated, Man's analytical mind has almost completed the conquest of Earth.

THE END

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